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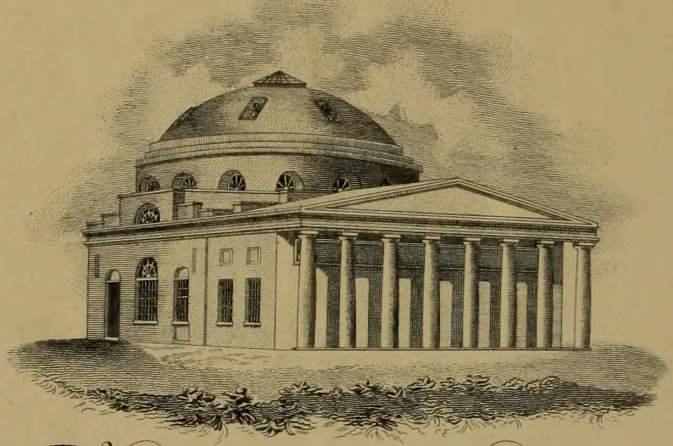

University of Maryland

Md.
Coll.

University of Maryland Theses

Master's Degree in Medicine and Doctor of Physical Therapy Dissertations with Combined Tables of Contents

These manuscripts deemed as either an "Inaugural Dissertation" or an "Inaugural Thesis" were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physical Therapy during the years 1819-1924. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or pages. To address these errors, an additional "Corrected Tabbed Contents" has been inserted in the beginning of each volume.

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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UNIVERSITY OF MARYLAND

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[1] Text lost in inner margin during binding process.

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1830

Dissertatio Inauguralis

Praefecto

et Professoribus

Academiae Marilandicae

Submissa

Hoc quarto die

Calendarum Aprilis

Anno Domini Millesimo

Octingentesimo et trigesimo

a Richardo Shea

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Ars medendi, de qua vita salusque hominum multum dependent, licet primo ab empiricis et agyrtis multum tardata, tamen lente progressa gradatim et quasi ritu fluminis quod semper crescit, vires que acquirit eundo, ad multam perfectionem his nostris temporibus pervenit. Opera pretium esset, conari ab initio causas et gradus, quibus eo magnitudinis accrevent, cognoscere, si tempus et ingenium ad tantum inceptum non mihi deessent quoniam Medicina inter scientarum nobilissimas jure censetur -

Sed secundum Academiae Marilandicae consuetudinem aut legem quae

ab unoquoque ejus alumnorum Thesin poscit,
mihi in animo est aliquid hujusmodi
apponere, et eo animo Dialectem seligo
quanquam morbus cujus Pathologia est
multum in abstruso; sed non adeo
plenus sum vanitate, ut his chartulis
meis addendum esse aliquid novi
ad scientiam tam bene cultam ab
illustrissimis et accuratissimis tum
nostri tum etiam proteriti temporis,
putarem — Sed omnes qui sese in hac
nobili et quasi divina arte prestare
student pro viribus parte mihi, decere censeo.
ne, tempus studendi in otio et ludo ali-
isque malis moribus corrumpendo

multo cum periculo ægrotantium, qui vitam
suam in eorum manibus ponerent, ludibri
brio forent. non solum doctis, verum
etiam vilissimis hominum, qui semper
ablatare medicum propter ejus ignoran
tiam, et opprobria passim jactare
amant. ad hæc opprobria evitanda
pro se quisque animum acriter intendat
imprimis ad Phylosophiam naturalem
Chymiam, et Anatomiam, aliasque
multas artes, quibus scientia ad sum-
mam altitudinem, quam nunc tenet,
progressa est. Preterea maxime optan-
dum, et pro artis dignitate, et pro

hominum salute, omnes, qui hoc studium tentant, animos scriptoribus antiquis, tum etiam recentibus daturos, ut ex his discant quo ritu medicamenta (in quibus semper aliquid venenosum latet) in humano corpore agant, quomodo in primis viis operantur, quasque alterationes in aliis singulis corporis partibus faciunt. si mathematici et mechanici suam artem experimentis doceant, cur non eadem regulâ in Medicina utemur, quoniam nulla alia semita, qua ad intima scientiarum penetralia itur. Si Medicus his optimis studiis paratus ad ægrotantis lectulum veniret, proculdubio

tutius multo, ac certius, cumque majori patien
tis salute, sua arte utetur, non sine magna
spectantium laude; fines etiam patriæ suam
gloriam continere non possunt, sed transmis
mari ac montibus, a solis ortu usque ad oc
casum notus esset. Si natura ipsa prescri
bit, ut homo homini, ob eam causam, quod
is homo sit, consultum velit, quid non
Christiani religionis luce illuminati
facere debent, ut hominibus, quos pro
fratribus videre docentur, prosint.
Nam si ad precepta sacra historiæ spec
temus, non est, quod dubitemus, opere Dei
fungimur, quoties auxilio hominibus prestem

pauperibus essemus, quoniam ex iisdem sacris scriptis pro certo habemus, poculum aquæ non dari frustra et sine premio - Statui, ut ante dictum, aliquid in forma Thesis Præceptoribus Collegii Mariæ Terræ submittere et eo animo Diabetem seligo, Diabetes derivatum esse dicitur, a Græcis verbis διὰ per, et βαίνω eo - Hic morbus apud antiquos adeo rarus fuit, ut vix mentio ejus ab illis fieret; Galenus tantum binos hoc laborantes a se visos esse dicit: in nostro autem sæculo vini compotationibus et gulæ dedito, morbi hujus exempla satis crebra, ne dicam quotidiana occurrunt - Quanquam satis familiaris, et quoad Typum, bene notus sit; quæ tamen ejus sint causæ, et ratio fere in toto

nescitur. Super his perquirere nitemur. Hoc affectu labo
rantes multo plus mingunt, quam bibunt; item con
tinuam, et insatiabilem famem, febremque lentam
et quasi hecticam semper habent: insuper dolo
re ventris, lassitudine in lumborum regione, et
frigidis pedibus, matieque ac marcore afficiun
tur: quinetiam vertigo, dolor capitis, et æger
anhelitus hunc morbum indicant: laborantibus
diabete urina excretis, ut ante annuimus, maxim
copiosa existit; humores et succi, necnon solida
partes liquifacta exhauriuntur, qua de causa
cutis ac fauces arent, pracordia violenter æstu=
ant, et pulmones magna vi urgentur, ut san
guinem in solita circulatione continerent

Nunc ad magis arduum nodum, et qui videtur nobis revera vindice dignum esse, ventum est, viz dulcitudinem, et saporem mellitum urinæ, de quo, medici certant, et adhuc sub judice lis est." Hoc Phenomenon incognitum esse diutius donec vir doctissimus Willis id observaverat; multi hoc ad Chymicæ artis vim referunt, dicendo urinam sapore salso privari, nam experimentis probatur plures sales diversa indole et natura cum acido miscentur, acrimoniam suam amittunt, hoc cum ita sint, non est cur miremur, quod urina hoc morbo affecta minime salsa sit: Cur autem instar sacchari aut mellis

id demum valde admirandum est; sententia, quæ morbida actione renum causam attribuit, nobis maxime arridet, nam in sero nulla particula invenitur. His, qui eam hypothesin tenent, minime improbabile videtur uream quæ cum sanguine in corpore sano secreta est Diabete in saccharum mutatam esse, quippe inter saccharum et uream magna analogia existit, duplice quantitate oxigen et carbonis in saccharo existente, et eadem hydrogen ac in urea — Hic ad investigandas ejus causas venimus, et licet a celberrimis viris nostræ et aliarum nationum de ejus Ætiologia multum disputatum, tamen in

plurima obscuritate adhuc restat. Multi, ut Sydenham, Rollo, Cullen &c viri magna fama et indole ejus originem debilitati stomachi aliorumque organorum concoctionis referunt. alii oqui vel majoris nominis causam ejus in mala renum conformatione ac secretione morbida ponunt: intemperantia, copiosa evacuationes, frigida temperies cum longo et duro labore ale alius culpantur. Quod nonnulli pro diabetis causa putant, a vero longissime distat, viz renum attractionem, quippe renes non sanguinem trahunt, sed cordis et arteriarum vi pellitur. Cum ita sint varia de hac lethali morbo sententia celebrissimum hominum

non nostrum inter eos tantas componere lites"—
ergo si tempus mihi vacet, et animus feret, pruden
tia autem mihi vellicat, quo minus tanti
aperis negotium conatus essem, ne insuetia
mea doctissimis viris, qui hanc thesin perpen
dent, risum proheat: nam cum ad utilitatem
vitæ omnia consilia factaque nostra dirigen
da sint, confidere ingeniis eminentium hominum
quam nostris tutius esse puto, et libentius
novis et recentibus, quam remotis ac prope ob-
litteratis exemplis uti debemus — Nunc
ad Therapeuticas indicationes transeo — Quod
vero ad curationem pertinet: difficillimum

mihi veras medendi intentiones designare videtur, quoniam causa hujus morbi ita in obscuro est, et tam profunde latet, necesse est curam in pari difficultate esse - Quoad prognosin hic morbus proverbium "venienti occurite morbo; vel principiis obsta" confirmat, nam in principio sæpe et facile curatur; sed neglecta curatione difficillimus medendi vadit -

In hoc affectu, sicut in plerisque aliis tres sunt indicationes therapeuticæ viz Curatoria prophylactica et dietetica. In primo remedia astringentia ac incrassantia quorum particulæ viscosæ admodum et glutinosæ in sanguinem

admisso corpusculis ejus activis pertinaciter adherent et sanguinis fusio ne fiat, impediunt, magno usui esse dicuntur; quare oriza ac alia mucilaginosa medicamenta, nec non Gummi et resinosa quodam in hoc morbo juvare putantur.

Ut sanguinis fusio aliquatenus facta tollatur ea naturâ remedia, quo salium concretiones dissolvunt, sanguinisque crasin preservant vite indicantur. Aqua calcis, serum aluminis, Keno ac catechu eximie commendentur etiam tinctura Antimonii cum rasura sassaphras bono eventu data est. Phlebotomia a nonnullis maxime ladatur. Opium cum ferri carbonate

abralis multi estimatur: hoc morbo affecti dietâ carnea omnino et sine ulla mixtione a Rollo ac Sydenham vesci jubentur. Remedia, quæ in Diabete maximo usui esse inveniuntur, hujusmodi sunt, quæ particulas viscosas et glutinosas habentia et vulgo incrassantia dicta sunt. Præter hæc primaria, restat aliud secundarium scilicet hypnoticum, quod, spiritus animales sistendo, ad sanguinis cursum retardandum, et ad effervescentiam ejus non mihil impediendam, spectat; ea intentione diacodium omni vespere sumendum, et si illud minus efficit, laudanum noctibus singulis aut

alternis

bono fructu exhibitur. Sulphas cinchonæ, ac magnesia multa cum laude a Trotter Richter &c utuntur: balneum tepidum cum frictionibus non sine usu est. Dieta vegitabilium contra vulgam opinionem, aliquando utilior carne sola invenitur, ut a doctore Starkley testetur; hic vir hominem diabete laborantem eo regimine cum phosphate sodæ, ter die sumptis, sanavit. Multa alia medicamenta viz cuprum ammoniacum, tinctura Cantharidum, camphora ac phosphas ferri cum ammonia et alumine usurpantur. Laudanum secundum Prout solum est remedium, ad mitigandam universalem irritationem

quo huic morbo semper comes est - acida minerali. cinchona, uva ursi juncta cum opio sunt inter remedia, quo in hoc affectu dantur -

Sed hoc et his similia utcunque animad versa aut estimata erunt, (quoniam non est mihi tempus ad satis investigandum) nec affermare nec refellere in animo est - Sed quovis censori ex Horatio dicerem "si his rectius aliquid novisti, candidus imperti si non his utere mecum" -

Dissertatio Physiologica

Inauguralis

de

Alimentorum Concoctione,

quam,

Annuente Summo Numine,

Præfecti, Regentium, et Facultatis Medicinæ

examini subjicit,

Pro Gradu Doctoris,

Caleb Jones, Baltimoriensis.

Datum, XIII. Kalendarum Aprilis, A.D. MDCCCXXX.

"Veniet tempus quo ista quæ nunc latent, in lucem diès extrahet et longioris ævi diligentia." Seneca.

"Quum hæc per multa volumina, perque magnæ contentionis disputationes à medicis sæpè tractata sint, atque tractentur, subjiciendum est, quæ proxima vero videri possint." Celsus, de re med. Lib. 1. Præfat. p. 15.

Joanni Buckler M. D.

haud minùs ingenii acumine,

quàm

morum comitate,

claro,

Hanc Dissertationem,

Animi grati memorisque

Testimonium offert

Amicus et Discipulus,

Caleb Jones.

Nathanieli Potter M. D.

Theoreticæ Medicinæ, Praxeosque

in Universitate Terræ Mariæ,

Professori Eruditissimo,

Hanc Dissertationem Inauguralem,

Summâ cum observantiâ,

Dedicat

Auctor.

De Alimentorum Concoctione.

Dùm opus aggredior legibus Universitatis Terræ Mariæ Candidatis suis mandatum, id, modo quo deceret, me exequi posse, omninò diffido. Sed probè intelligo doctorum esse virorum juventutis favere conatibus, ipsique errata condonare; igitur, Facultatis indulgentiæ benignitatique innixus, et incipiam, atque pauca de Alimentorum Concoctionis naturâ et effectibus, dicam.

Concoctio eas complectitur corporis actiones, per quas cibum potionemque assumimus et concoquimus, atque per quas eadem hæc in sanguinem convertuntur. Hæc porrò propria est animalium functio, et, ut Samerringius ait, "animal ventriculi expers innotuit planè nullum". Alimentis autem rectè concoctis, animalis vigor venustasque foventur ac servantur. Primùm de alimentorum in ore mutatione dicere oportet. Cibus in os infertur,

labiis, buccis, et linguâ circùmvolvitur, dentibus man=
ditur et extenuatur. Anatome, ut dicitur, comparata
nos docet, genus cibi quo utitur animal cum figurâ
maxillarum, dentium, ac musculorum maxillas mo=
ventium, arctè connecti, iisque omnibus apprimè accomo=
dari; sic cani, feli, cæterisque animalibus quæ carne
pascuntur, dentes acuti, incidentesque sunt, nec eorum
maxillæ obliquè moventur, ita ut cibus ab iis potiùs dilaceretur
quàm contundatur. Equo autem, aliisque animalibus quæ
gramina carpunt, dentes cacuminati desunt, molares
sunt obtusi, maxillæ quoque eorum obliquè moventur, cibusque
conteritur et comminuitur. Inter hæc duo animalium genera,
homo quasi medium obtinet locum; hinc dicitur omnivo=
rus, quamvis propiùs animalibus quæ herbis pascuntur,
quàm carnivoris, accedit: non sub uno cælo vivere, nec
uno cibi genere vesci, cogitur, utì è testimoniis scrip=
torum omnium ferè seculorum evidenter apparet.

Alimenta molliora linguâ comprimuntur, sicciora autem et duriora, dentibus mansa, in massam mollem rediguntur. Cibus hoc modo confectus coactusque, facilius cum salivâ miscetur et gulæ traditur, ac denique multò promptius in stomacho solvitur et concoquitur. Inter mandendum cibus penitùs commiscetur cum salivâ, muco, cæterisque oris humoribus. Tunc autem saliva, quæ ex plurimis glandulis conglomeratis in os influit, copiosiùs manat, quia cibus in ore circumvolutus glandulas, quæ salivam suppeditant, extimulat per ramos quinti paris nervorum. Ostiis ductuum salivalium concitatis, glandulæ quoque cientur. Fluit etiam saliva esurienti, ad conspectum, vel etiam odorem cibi jucundi; motus denique maxillarum salivæ profluvium auget.

Satis constat, salivam actionem vorandi faciliorem reddere, solutionemque alimentorum juvare; hoc enim probare videntur celerior concoctio

alimentorum probè cum salivâ commistorum, ac major salivæ copia in animalibus quæ herbis pascuntur, et quibus sanè digestio difficilior, quàm in animalibus carnivoris. Saliva porrò gustatum subtiliorem reddit, nam pulpa nervosa linguæ nunquàm nisi materiâ liquidâ afficitur. Multi auctores celebres salivæ vim fermentandi tribuerunt, et ex quibusdam experimentis colligitur, eam quodammodò putredinem tardare.

Cibus in ore paratus, gulæ traditur, et ad ventriculum propellitur, non pondere quidem suo, sed musculorum contractione, quæ à faucibus incipiens, ad stomachum propagatur; hujus motûs initium à voluntate pendet, progressus verò nullo modo voluntati subjicitur. Cibi introïtum in nares, tubamque Eustachii, impedit velum pendulum palati; aditum autem laryngis claudit glottidis contractio, juvante

quoque epiglottide; hac verò non absolutè necessaria est, ut variis experimentis Magendie demonstravit.* Adeò admirabiles esse videntur hæ actiones, ut Caserius asserere non dubitaverit: "Talem structuram, tale officium esse, ut stupidus ille, vecorsque dici mereatur, quem non eorum consideratio, attonitum quasi, in admirationem Dei rapiat." (Meckel, Manuel d'Anat. Tom. 3. p. 489).

Ventriculus, cùm inanis est, contractus actione tunicæ musculosæ semper reperitur, nullum

---

*Magendie, observationibus plurimis innixus, censet glottidem contractione musculi crico-thyroidei, et musculorum arytænoideorum occludi, hisque solis ramos mitti à nervo laryngeo superiore; à nervo autem recurrente, alios laryngis musculos ramis instrui, arbitratur, et ideircò, hocce nervo secto, animal cibum, potionemve, facilè tutòque, nihilominùs sumere posse. "Memoire sur l'usage de l'Epiglotte dans la Deglutition, p. 7, 12."

motum exhibet, ejusque intima membrana rugosa est. Alimentis autem in stomacho coacervatis, ejus figura omninò mutatur. Primùm enim superior ejus pars, deindè verò pars inferior, cibo distenditur; omentum arctissimè ventriculo applicatur, rugæque membranæ villosæ delentur, et tunica interna, plurimo sanguine nunc in arterias influente, rubescit.

Alimenta haud extemplò per ventriculum transeunt, detinentur ibi aliquandiu, nam stomachus contrahitur, et simul sublevatur in parte inferiore quæ Pylorus appellatur. Os ventriculi superius cingit annulus musculosus. Hujus autem conformatio, actioque annuli, valdè mirandæ sunt, nam arctè sese contrahit dùm aëra in pulmones attrahimus, et quandò igitur comprimitur ventriculus, dùm verò aëra expellimus, omninò relaxatur. Tanta est vis musculorum ventriculum occludentium, ut, ventriculo inter manus

compresso, cibus non sine magno nisu exprimi possit, quandò sese contrahit gula, facilè verò quandò relaxatur; rem ita se habere, Hallerus, Magendie, Fiedemann et Gmelin, aliique auctores spectatissimi testantur.

Clarus vir Everardus Home asserit se in canibus vidisse ventriculum, dùm cibus in eo concoquebatur, mediâ parte contractum, adeò ut bipartitò divideretur. Idem quoque nonnunquàm in cuniculis conspici posse, testatur W. Philip.* Affirmant verò Fiedemann et Gmelin, sese nunquàm animadvertisse, (etsi rem plurimis experimentis explorare conati fuerint) ventriculum felium, equorum, sivè etiam canum, hoc modo partitum; quâpropter, illustrem auctorem qui hanc sententiam protulit, in errorem incidisse arbitrantur.

---

* "Inquiry into the laws of the Vital Functions, p. 159"

Ventriculi motus, qui peristalticus vocatur, perspicuè cernitur dùm alimenta concoquuntur, aliquandò verò vix ac ne vix quidem perspici potest, adeò ut nonnulli physiologiæ professores eum nunquàm existere crediderint. Pars alia ventriculi post aliam se astringit, tùmque relaxat, motusque ab unâ extremitate ad alteram undatim propagantur; hæ verò contractiones præcipuè valent circùm os inferius, et quantò acrior est cibus, tantò validiores videntur. In ventriculo inani, paululum tantummodò humoris limpidi, aquæ simillimi, et ventriculo adhærentis, reperitur; si verò membranam internam irrites, calculis devoratis (ut experimentis suis Fiedemann et Gmelin probavêre), vel alio quocunque modo, plurimum effunditur liquoris, qui haud dubiè acidus est, quippè qui solutionem heliotropii rubefaciat. Eodem modo, cùm ~~cibus~~ alimenta ventriculo ingesta ~~est~~ sunt, succus qui ea digerit, abundanter effunditur, et quidem eò copiosiùs, quò difficiliora concoctu sint alimenta.

De hujus succi naturâ diù multùmque disputatum est inter medicos. Quidam humorem ventriculi acidum, alii verò alkalinum esse, putaverunt, nec desunt qui neutri opinioni accedentes, eum subdulcem esse existiment. Dumas censuit stomachi humorem, in animalibus quæ fruges comedunt, acidum esse, in iis quæ carnibus utuntur, alkalinum, ac demùm in iis, quorum victus et ex frugibus et ex carne constat, succum nullis qualitatibus notatione dignis præditum esse.

Humorem acidum, qui in ventriculo complurium animalium reperitur, saliva et gulæ liquores profectò non componunt, sed eum effundunt folliculi, quibus scatet membrana intima. Humor autem qui reperitur in ventriculo animalis esurientis, et succus qui per eum diffunditur, dùm cibus concoquitur, maximè inter se differunt, et ex hoc fortasse pendet diversitas sententiarum de naturâ humoris ventriculi.

Annotant enimverò Gosse Genevensis, Montegre, Fiedemann, et alii, humorem è ventriculo animalis esurientis vomitu ejectum, nunquàm solutionem heliotropii rubefacere, succum autem è ventriculo alimentis repleto ejectum, semper acidum esse. Hunc humorem verè acidum esse, probare conantur nonnulli, ex eo quòd lac ab eo coagulatur, non solùm dùm vita manet, sed etiam post mortem. Hæc ~~porrò~~ autem objectio facilè deluitur; nemo enim est qui nesciat, ventriculum ipsum exsiccatum vim cogendi lactis perdiù retinere, quæ quidem vis certè non substantiæ cuiquam acidæ tribuenda est. Opinatur Everardus Home lactis coagulationem ad dextrum stomachi latus solummodò effici, ubi complures folliculi mucosi reperiuntur; verùm eam circà latus sinistrum observârunt philosophi peritissimi, Fiedemann et Gmelin.*

Humorem ventriculi acidum esse affirmaverunt plurimi auctores, Viridet, Carminati,

* Recherches Experimentales sur la Digestion, traduites par Sourdan.

Brugnatelli, Werner, Prout, Fiedemann et Gmelin, multique alii. Sed de naturâ hujusce acidi, inter se non consentiunt; alii enim acidum aceticum, alii verò acidum muriaticum, vel phosphoricum; quidam acidum quod lacticum vocatur, nonnulli deniquè acidum, ventriculo proprium et indè gastricum appellatum, in ventriculi humore existere arbitrantur. Acidum muriaticum in ventriculis complurium animalium inesse probaverunt Fiedemann et Gmelin. Idem acidum quoque Prout et Children repererunt, in quibusdam brutis animalibus atque etiam in humore vomitu ejecto ab hominibus malè concoquentibus. Acidum aceticum in equorum, canumque stomachis, et aliud quod appellatur "acide butyrique," in equo, invenerunt Fiedemann et Gmelin; atque opinionem doctissimi Berzelii sequentes, acidum lacticum nihil aliud esse quàm aceticum, credunt.

Hinc perspicuum est, medicos parùm hujus humoris naturam intelligere. Nec etiam plenam habemus

notitiam mutationum quas alimenta in ventriculo subeunt.
Cibus unam ferè horam in ventriculo retentus, mollescere incipit,
donec fit massa penè fluida, quæ Chymus à medicis nominatur.
Hac porrò massa, ut comperit Magendie, quanquàm semper
acidula est, dotes habet varias pro genere alimentorum.
Hanc verò cibi mutationem actione humoris ventriculi effici,
luculenter docent experimenta clarissimorum Reaumur, Spallanzani
et Stevens, qui globos perforatos, et cibo repletos, in stomachum
animalium vivorum, atque etiam hominis ipsius, immiserunt,
et brevi, cibum omninò solutum et concoctum invenerunt.
Stevens porrò multa hujusmodi experimenta fecit, in equite
Pannonico, qui Edinburgi fuit, et qui calculos, vulgi oblectandæ
causâ, devorare consuevit. Huic devorandum dedit Stevens
globum cavum, parvis foraminibus terebratum, in quem carnis
aliquantum inseruit; post unam et viginti horas, carnem
pondere imminutam, et ex magnâ parte solutam, reperit.
Iteratis experimentis, caro bubula leviter mansa, penitùs soluta
est, sed tritici grana et alia ejusdem generis, nullo modo

mutata sunt, et ossa ne minimè quidem erosa sunt. Ex=
perimentis his similibus institutis in multis diversorum generum
animalibus, probavit Stevens non solùm ossa, sed etiam du=
rissimum ebur, à canibus solvi concoquique. Doctor N. R.
Smith, Chirurgiæ Professor in hâcce Universitate, in libro
cui titulus: "A Physiological Essay on Digestion," censet, his
experimentis Reaumur, Spallanzani et Stevens, minimè probari,
cibum humoris cujusquam actione concoqui; hoc enim probari
negat, si hæc experimenta ullâ aliâ ratione explicari possunt,
ea verò aliter interpretanda esse putat, cibique mutationem
actioni membranæ villosæ, non humoris ventriculi, tribuit:
"the villi of the stomach, being probably capable of elongation,
and attached to a very moveable membrane, would be capa=
ble of seeking the aliment contained in the stomach, and of
coming in contact with that which is enclosed in the balls;
and it is to be observed, that it is only that portion which is
in the neighbourhood of the holes, that is found changed."*

Vis solvendi quæ inest humori ventriculi, sanè

* page 47

miranda est; in ventriculo cujusdam hominis, complures cultri, quos ille superioribus annis temerè devoraverat, post mortem reperti sunt, manubriis erosis et laminis prorsùs retusis. Quidam philosophi, ut comperirent utrùm succus stomachi cibum extrà corpus positum, solvere posset, plurima experimenta instituerunt. Spallanzani copiam hujus succi nactus, carnem in eo posuit, et paucas post horas, admoto calore, eam molliorem et penè solutam invenit. Stevens carnis portionem unam in vase cum humore è ventriculo canis esurientis collecto, et alteram in vase cum aquâ purâ posuit, et vasibus tantum caloris admovit, quantum corpori canis inest; cibus cum humore ventriculi commistus, spatio octo horarum, prorsùs solutus est; cibus verò, cui aqua affusa fuerat, ne minimam quidem mutationem exhibuit. Censuerunt quidem multi viri celebres, experimentis à Montegre recentiùs institutis, clarè probari, digestionem nullo modo extrà corpus effici posse, at hujusmodi experimenta Tiedemann et Gmelin nuperrimè iteraverunt, et opinionem Spallanzani et Stevens confirmaverunt. Satis autem constat, vim humoris ventriculi minùs evidenter extrà corpus, quàm in stomacho

animalis viventis, exhiberi. Et quidem singulis animalium speciebus quædam alimenta natura destinavit, ad quæ concoquenda, vis humoris ventriculi accomodatur.

Dicitur quoque, hoc humore potentissimo nonnunquàm stomachum ipsum, brevi post mortem, corrodi. Hanc ipsius ventriculi solutionem annotavit cl. Ioannes Hunter, cujus observationem corroborant quidam medici omni fide digni; inter alios appellare licet celeberrimum Doctorem Cooke, ("Treatise on Diseases of the Digestive Organs"). In quodam cadavere, quod illicò post mortem scrutatus est Burns, stomachum vidit omninò sanum ac integrum, brevi autem morâ interjectâ, eundem peresam et erosum invenit;* idem quoque evenit in cuniculis, quos, postquàm cibum ceperant, W. Philip interfecit, et, multis interpositis horis, incidit.†

Quanquàm ventriculus ipse hoc modo post mortem roditur, cibus tamen haudquaquàm mutatur. Ad hoc explicandum, W. Philip asserit, stomachum ipsum (cibo qui tunicæ internæ stomachi applicatur, penitùs concocto, nec motu ventriculi propulso, atque igitur, novâ cibi portione

*"Abercrombie on Diseases of the Stomach &c. p. 37."
†"Inquiry into the Laws of the Vital Functions, p. 169."

humoris actioni non subjectâ,) necessariè ergo di humore ventriculi; "the gastric juice ..... necessarily acts on the stomach itself, now deprived of life." * Idem verò vasorum absorbentium actioni tribuit Doctor Smith, his verbis: "We know that absorption is performed with great energy in the article of death, and I believe after apparent death, or after the animal functions have ceased to be performed. We have reason also to think, that appearances resembling those of ulceration, have taken place after apparent death." † Et alio loco: "We know very well the extreme vascularity of the stomach, and that its capillary vessels, and particularly its absorbents act with unparalleled energy; we know also that different portions of the stomach derive their vitality from different portions of the nervous system. Is it not possible therefore to conceive that one part of the stomach having lost its vitality, may be acted upon by another which retains it?" ‡

Omnes opiniones, quas, ad digestionem explicandam ediderunt medici, ad mutationem cibi in ventriculo praecipuè spectant. Hippocrates Cous, et Galenus inter veteres medicos, inter recentiores Grew et Santarellius, cibum

* "Inquiry into the laws of the Vital Functions, p. 166"

† Op. Cit. p. 44 ‡ Op. Cit. p. 45.

per calorem concoqui putaverunt. Jam verò ad hanc opinionem refellendam, plurimis argumentis non opus erat; calor enim corporis humani proprius, ad concoctionem perficiendam non sufficit, et prætereà, pisces, quibus calor exiguus est, cibum tamen facillimè concoquunt. Quidam cibum in ventriculo putrescere crediderunt. Hanc sententiam, quæ originem duxit, ut ait Celsus, à Plistonico, Praxagoræ discipulo, strenuè tuti sunt multi philosophi, atque etiam illustrissimus Cheselden. Cibum autem nunquàm in sano ventriculo putrescere, satis liquet ex experimentis Hunter, Spallanzani, aliorumque medicorum. Enimverò ventriculi humor putredini omninò obstat.

Olim valuit notio cibum in ventre atteri, et hanc opinionem confirmare videbantur, quæ in avium stomacho musculoso eveniunt; vitrum, scilicet, in pulverem redigitur, acus obtunduntur et franguntur, globi ferrei etiam ingenti vi comprimuntur, ipso ventriculo ne minimè quidem laso. Experimenta verò Spallanzani et Stevens supra memorata præclarè docent, concoctionem nequaquàm triturae tribuendam, et porrò, ut benè scimus, hic alimentorum tritus in stomacho volucrium musculoso, initium tantummodò digestionis

est, ac similis videtur actioni quâ cibus in aliis animalium generibus manditur. Quidam etiam viri non mediocres ventriculi vires astimare conati sunt; multùm autem inter se discrepant, alii enim cum Borellio et Pitcarnio cibum in ventriculo comprimi, vi ducenties mille librarum, alii verò paucarum tantùm unciarum, putaverunt.

Doctissimus Hallerus omnes mutationes, quas cibus in ventriculo subit, explicare conatus est merâ maceratione, juvantibus sanè calore ventriculi, ejusque motu, et putredine quâdam alimentorum. Experimenta verò illustrium Spallanzani, Tiedemann et Gmelin, satis demonstrant, cibi macerationem ab ejus concoctione plurimùm dissidere.

Complures ex physiologiæ professoribus, cibum in stomacho fermentescere arbitrati sunt. Hanc opinionem primus edidit Vanhelmont, et experimentis firmare conati sunt celeberrimi Pringelius et M^c^Bride. Bostock quoque, cibi concoctionem actioni fermenti quodammodò similem esse, credit, ait enim: "1. The substances (ea, scilicet, quæ fermento aut humore ventriculi mutantur,) possessed of various properties, and composed of elements in different

proportions, are all reduced to an homogeneous mass, by the addition of a minute quantity of an extraneous body. 2. The quantity of the ferment, the substance which is the immediate agent in this process, is often extremely minute, in proportion to the effect which it ultimately produces. 3. The subjects of fermentation, are the products of organization alone. 4. The process is frequently deranged or suspended, by apparently very slight causes. 5 When the process is completed, if the substances are kept in the same situation as at first, a new operation sometimes commences, inducing a new fermentation, &c. &c." *

In aliâ ejusdem libri parte, auctor doctissimus asserit hanc sententiam veram vel falsam esse, juxta ideam quæ cum verbo "fermentation" conjungitur.

Opinio eorum qui credunt, cibum humore ventriculi solvi, nititur innumeris experimentis, quæ Spallanzani, Stevens, Tiedemann et Gmelin, aliique auctores celebres instituerunt. Huic explicationi quidam philosophi nolunt assentire, quia cibi concoctionem, utpotè actionem vitalem, legibus vitalibus prorsùs regi censent. Affirmant verò Tiedemann et Gmelin, digestionem functionem vitalem esse,

* System of Physiology, Vol. 2. p. 415.

quamvis alimenta humore ventriculi solvantur; hic enim humor ex arteriis stomachi effunditur, quod nunquàm nisi vi vitali fieri potest. Hinc, digestionem impediunt quæcunque sanguinem, humorum corporis fontem, corrumpunt, quæcunque respirationem, vel sanguinis circuitum, vel denique genus nervosum lædunt. Ex hoc quidem nexu inter genus nervosum et alimentorum concoctionem, alia exoritur opinio, per quam cibi mutatio nervorum actioni tribuitur. Nervos ventriculi aliquo haud exiguo munere fungi, colligere licet, ex eorum varietate et magnitudine, et ex origine ex quâ veniunt, ex nervis, scilicet, pneumo-gastricis et intercostalibus. Et præterea, cibi concoctionem aliquandò deturbant, vitiantque graves animi affectiones, ut anxietas et mæstitia, quæ stomachum afficere non possunt, nisi per nervos è cerebro exeuntes. Experimenta haud pauca, ad hanc rem explicandam, adhibuerunt medici. Rufus Ephesius dicitur primus comperisse, concoctionem omninò prohibi, sectis vel ligatis nervis paris octavi. Hujusmodi experimentis à Blainville, Legallois, Brodie et Philip narratis, satis probari videbatur, digestionem nunquàm

progredi, nervis incisis. Hæc autem experimenta iteravêre plurimi auctores spectatissimi, contrario exitu, donec certissimè comprobatum est, merâ nervorum divisione, vim stomachi haud imminui. Mutationes, quas digestioni affert sectio nervorum, alii paralysi fibrarum moventium ventriculi, attribuunt, alii defectui humoris stomachi, Magendie verò impeditæ respirationi. Hic quidem affirmat, nervo vago in thorace diviso, postquàm nervi pulmonum orti sunt, cibum in ventriculo modo solito concoqui. Sed nulla experimenta, nullasve observationes, in libro "Compendium of Physiology," protulit, ad hanc sententiam confirmandam.

Ultima de hâc re opinio, quam memorare oportet, eorum est, qui vi vitali cibum in ventriculo concoqui putant. Contra hanc sententiam, plurimùm valent experimenta Spallanzani, Stevens, Tiedemann et Gmelin; sed de hâc opinione, quam amplexi sunt clarissimi Hunter et Fordyce, nihil amplius dicam, at verba ipsa doctissimi Bostock proferam liceat: "In this,

as in other analogous cases, the doctrine of the animists proceeds upon the principle, that no modification of the laws of Chemistry, or Mechanics, can account for the phenomena, and that it is consequently necessary, to assume the existence of some new agent, to meet the emergency. But by this, we throw no new light upon the difficulty, and are only employing a different expression, to announce the fact, and one which is less simple and intelligible."* Et rursùs: "The vital principle has been employed to express all those actions, which could not be referred to any other general principle."†

Iam pauca dixi, de cibi mutationibus in ventriculo, et de innumeris ferè opinionibus, quibus hanc rem difficilem explanare conati sunt medici, nunc autem de modo quo cibus priùs in intestinis mutatur, quàm in sanguinem deferatur, loquendum est. Cibus cùm penitùs in ventriculo solutus fuerit, paulatim

* Syst. of Physiology, Vol. 2. p. 409. † Op. Cit. p. 149

in intestinum superius, sivè ventriculum secundum, traditur, et ibi, in humorem nutrientem, qui Chylus nominatur à medicis, convertitur. Cibo autem in intestinum tenue immisso, uberiùs effunduntur bilis, humorque Pancreatis, et succus intestinorum. Magna exorta est dissensio inter medicos, de munere quod bilis exequitur; crediderunt quidam, bilem nullo modo digestioni prodesse, sed è corpore prorsùs excerni. Fel verò aliquo præstanti officio fungi, satis constat ex hepatis situ in regione abdominis superiore, ex intestini parte in quam influit bilis, et denique ex experimentis clarissimorum Brodie et Tiedemann, qui ductui hepatico linum circumdedère. Quædam certissimè bilis elementa, ut mucus et resina, sales et materia colorans, è corpore cum fimo ejiciuntur. Attamen probatum est, bilem perfecta concoctioni alimentorum, et inprimis eorum quæ oleosa sunt, necessariam esse. Fel etiam intestina ad justam contractionem, et ad uberrimam humorum effusionem, incitat, et

stercoris fœtorem imminuit, quod quidem vix credibile, tametsi id attestantur Tiedemann et Gmelin. Quanquàm autem tot ingeniosissimi auctores de hâc re disseruerunt, eam tamen adhuc tenebris obvolvi fatendum est.

Nec magis de Pancreatis humore, inter se consentiunt medici. Alii hunc succum, ad humorem nutrientem ex cibi reliquiis secernendum, alii ad acrimoniam fellis temperandam, necessarium esse, arbitrantur. Doctissimus Hallerus ejus munus comperire frustrà conatus est, ac sic loquitur: "plura possunt esse officia liquoris (Pancreatis), nondùm satis noti." Magendie quoque, nos parùm scire de hoc humore, censet; eum tardè destillare annotavit, guttulâ solùm per quartam horæ partem, è ductu effluente. Hic humor salivæ simillimus videtur, minimè verò ex iisdem elementis ac saliva constat; hoc enim experimentis ostenderunt Tiedemann et Gmelin, qui Pancreatis laticem maximi esse momenti, ad humorem nutrientem elaborandum, et cum eo resorberi, putant.

Succum intestinorum mutationibus cibi pariter ac humor ventriculi prodesse, nonnulli viri

censuerunt, et quidem eò longior tubus intestinorum à naturâ factus est, eòque abundantiùs effunditur mucus è folliculis ~~Brunner et Peyer~~ intestini, quò minus nutrimenti cibus præbet. Intestinum tenue longius est in animalibus, quæ frugibus, herbisque teneris pascuntur, quàm in animalibus carnivoris, multò autem brevius, quàm in iis quorum victus ex graminibus, foliisque duris constat. In intestina hominis, octo libras laticis singulis diebus infundi, computavit Hallerus.

Humor nutriens, qui Chylus appellatur, per vasa lactea ad ductum thoracicum pervenit, et hinc ad dextrum latus cordis per venas defertur. Quidam philosophi hunc humorem in intestino tenui se vidisse putant; alii verò eum nusquàm existere, nisi in vasis lacteis, ductuque thoracico, asseverant. Hanc opinionem, quam nuper experimentis et rationibus confirmaverunt Fiedemann et Gmelin, proposuit in prælectionibus suis Professor Institutorum in hâcce Universitate, et defendit Chirurgiæ Professor in libro suprà memorato, ubi hæc

verba legimus: "I will hazard the assertion, that there was never a particle of what was ascertained to be chyle, obtained from any other source, than that of the lacteals, or thoracic duct. The existence of chyle in the intestines, has been presumed from the belief, that the lacteals have no power to effect a change on their contents, and that consequently, they were taken up, precisely as they are found in them. If this be the case, the conclusion is palpably false, for who can say that the lacteals have no peculiar actions, by which their contents are wrought upon." * Doctor Smith censet quædam alimenta, præcipuè ea quæ fluida sunt, venis ventriculi sorberi, et ad jecur deferri, ejusque in vasis capillaribus elaborari, cætera verò alimenta, aliquo modo humoribus ventriculi et intestini mutata, vasis lacteis hauriri; et hinc, cibum per duas vias sanguinem ingredi, putat.

Reliquiæ cibi, humore nutriente sublato, per intestina descendunt, et cum maximâ parte bilis, ac forsan humorum pancreatis, et folliculorum

* Op. Cit. p. 52.

intestini, conjunctæ, ad intestinum cæcum perveniunt. Intestinum cæcum quibusdam in animalibus adeò necessarium est, ut alterius ventriculi vice fungi videatur, folliculis numerosissimis instruitur, quorum succus solutionem heliotropii rubefacit. In equis, aliisque ejusdem generis animalibus, intestinum cæcum eandem ferè amplitudinem ac ventriculus habet, in animalibus verò carnivoris, parvum est, et in urso melique, prorsùs deest. Primùm in intestino pleniore stercus apparet, et fœtorem satis notum, et ex oleo quodam volatili nascentem, exhalat; propulsum autem in intestinum rectum, et multo ablato humore, gradatim spissescit. Massa hæc, quæ cellularum coli figuram retinet, exortâ dejiciendi cupiditate, contractione ipsius intestini, ac musculorum abdominis, septique transversi, è corpore depellitur. "Ut in ædificiis, architecti avertunt ab oculis et naribus dominorum, ea quæ profluentia necessariò tetri essent aliquid habitura, sic natura res similes procul amandavit à sensibus"

Cic. de Nat. Deor. II.

21 q.

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A Medical inaugural
Dissertation on inflammation
of the liver.
For a degree of doctor of
Medicine.

By
Thomas Blake Jr.

2

Of Hepatitis.

Hepatitis or inflamation of the liver is of two kinds Accute and chronic. The definition of this disease is. "Fever tension and pain in the right hypochondrium often accute as in pleurisy but more frequently dull, pain at the clavicle, and the top of the right shoulder, uneasy lying on the left side, difficulty of breathing and hiccough,, Accute hepatitis generally comes on with a sense of coldness pervading the whole body, the patient becomes negligent and listless, his memory is impaired, if cold air be admitted to him he feels unusually sensible of it. But this cold fit soon alternates with flushings of heat of short duration. But in every case the patient does not complain of cold from the commencement, on the contrary he sometimes feels unusually hot.

The fever is most severe at night, the sleep is unrefreshing and disturbed with frightfull dreams the mouth is dry, and there is considerable thirst. The pain in the side is sometimes slight from the commencement of the disease, in this case the fever is generally mild, but more frequently pain is accute from the first, sometimes it is so accute and pungent as to impede respiratio and at other times it is obtuse and conveys the sensation of a weight in the abdomen. The se of pain varies according to the part of the live affected, sometimes it is felt in the hypochondri at other times in the breast, but more freque in the epegastric region or at the scrobiculus The patient can with difficulty lay on the left side. If the body be bent forward so as relax the abdominal muscles, and the hand pu

on the region of the liver, it causes accute pain, and there is sometimes tumefaction in the hepatic region. Generally there is severe pain on expiration accompanied with a dry cough. The colour of the eyes in this complaint is for the most part yellow from a mixture of bile. Vomiting and hiccough are frequent and troublesome symptoms, and the appetite is impaired. The bowels are costive generally, but sometimes there is a diarrhea. The pulse is hard, strong, full and frequent, But the pulse varies in this complaint as in all the other internal inflammations. The urine is red, and deposits a sediment on cooling. The blood when drawn exhibits a buffy coat mixed with green. The mind is not much disturbed, except a short time

before deth when delirium comes on, or w
the patient is exhausted by want of slee
at the commencement the counternanc
does not differ much from the appeara
in other inflammations.

The diagnosis in this disease is in gener
easily formed for although there is n
one symptom peculiar to it yet whe
taken altogether they very clearly mar
the complaint. The only diseases with
which it can be confounded, are pleur
inflammation of the Stomach, and rheu
of the intercostal and dorsal muscles.

It may be mistaken for pleurisy, for
both these complaints there is pain in
the breast, which is increased on inspirati
cough, and difficulty of breathing.

In pleurisy however the pain is more accute and seated higher in the breast, the patient can lay equally well on both sides, the expectoration is generally bloody, and is much more severe.

It may be mistaken for inflammation of the stomach, but it can easily be distinguished from that complaint, for in the latter every thing taken into the stomach is immediately thrown up by vomiting, and the food and drink when taken cause excruciating pain.

It may be distinguished from inflammation of the intercostal and abdomenal muscles, by the pain in the latter been much increased on motion of the body, whereas in inflammation of the liver it is not atall so, and in hepatitis there is pain on pressure, therefore the

patient cannot lay on the right side.

The most frequent causes of hepatitis are injuries inflicted on the viscus itself, such as blows and falls, its situation size and consistance rendering it more liable to injury than any other viscus. Certain passions such as anger grief &c. the excessive heat of the sun, intermittent, and remittent fevers, and cold more especially when applyed to the neighbourhood of the liver when the body is heated, and lastly intemporance.

The prognosis is to be formed from the nature of the remote cause, the former habit of body, and from the exten. of the disease itself. When hepatitis is very accute, and of long standing, when th

body is worn out by some previous disease, when it attacks patients of a melancholy habit, and when the fever runs high, when the pulse is weak hard and quick, much thirst the pain still continuing undiminished, and the strenght waisting away, shows that the diseas is making rapid progress, and makes the prognosis unfavourable. On the contrary where the fever is slight, but little pain, pulse soft, and all the symtoms in general mild, a favourable prognosis may be formed.

The indications of treatment in this complaint may be reduced to three, first to reduce the vascular action in general, and more especially to diminish the impetus of the blood

to the liver itself. Second, to lessen the fever, and third, to obviate urgent symptoms.

The antiflogistic regimen, abstract of blood, purgatives, and refrigirents, answer the first intention.

The antiflogistic regimen, — But there are external stimulants to be avoided, to which the body in a sound state is constantly exposed. There are also others arising from the disease itself, both of which the antiflogistic regimen is well calculated to obviate, and since it is not adiquate to effect a cure it will very much expedite it.

Of the first order of stmulants mentioned, are all which affect the

external senses, such as light, noise, heat, either external or such as is produced by the body itself, exercise of the muscles such as is necessary to keep the body in an erect position, regimen, more especially animal food, and in fine mental inquietude.

Of the latter order, are thirst, constipation, acrimony of the humours, and increased heat from a deficiency of proper drink. The first of which it be only necessary to avoid, the latter are to be obviated as soon as possible, by deluent subacid drinks, emolient clysters, and by fengations.

The abstraction of blood, — When the action of the vessels depends on over distention, immediate bloodletting —

diminishes the inflammation, The quantity drawn is to be regulated by the strenght of the body, temprament, mode of life, climate, season of the year, nature of the remote cause, diathasis, and the appearan of the blood when drawn.

The good effect of bloodleting in this as in all other internal inflammations depends in some measure on its early use, and the quantity taken in a given time, for the larger the stream of blood so much more efficatious is the remedy, When there is as much blood taken from the patients arm as his strenght will permit, then it may be found necessary to draw blood from the neighbou-hood of the liver by means of a scarificator

and cupping glass, if the symptoms require it.

Purgatives, —— There are perhaps few complaints in which purgatives are more required than in inflammation of the liver, they tend to lessen the inordinate action, carry off the bile, and remove the fever, They are very much assisted in their operation by clysters.

The choice of purgatives also is a matter of some consequence. The neutral salts from their known effect of diminishing vascular action, and of determining to the surface, are the most usefull in the commencement. Towards the termination calomel, or calomel and jalap may perhaps be preferable.

Refrigerents. —— Those of this class which are of most advantage, are, cold, acids, and some of the neutral salts.

Worm fomentations applyed to the region of the liver, as they moisten the skin and produce a greatefull sensation, are often of singular benifit. But they are to be used with caution least the body should be exposed to cold after their application, or the garments or bedcloths wet, and least the fomentation should be applyed too worm.

Blisters. ——— When the desease is mild, or when reduced by proper treatment, a blister should be applyed to the side affected. But when the disease is severe in the beginning, a blister should not be applyed unless after copious bloodletting.

Sudorifics are indicated sometimes in this complaint, when the skin is dry and

then sudorifics which do not stimulate are usefull. For this purpose the neutral salts, drinking copiously of bland fluids, and the aqua acetitis ammonia, may be used.

Mercury is a remedy which deserves particular notice in this complaint. Although its use has been much abused, as in most others in which it is given, yet is a valuable remedy, when hepatitis is the consequence of intermittent, or remittent fever it will generally effect a cure, and in the accute state after all the other remedies have been used in vain, a slight salivation has restored the patient to health. But its use should never be had recourse to unless the antiflogistic plan has been rigidly premised.

1820 2

An inaugural Dissertation.
On Asthma.

Submitted to the examination
of the
Revd
(Provost Pro Tempore)
The
Regents and Medical Professors
of the
University of Maryland
On the 3rd day of April 1820.
For the Degree
of
Doctor of Medicine

By Daniel Scott Jr.
of Harford County Maryland.

Asthma.

The term Asthma, has been improperly applied to every species of Dyspnœa or difficulty of breathing. The methodical Nosologists have attempted to distinguish Asthma from Dyspnœa chiefly and almost entirely, by the former being the same affection with the latter, but in a higher degree; neither of these applications of the term seems correct or proper.

By Asthma we may readily understand, a difficulty of breathing attended by peculiar symtoms, coming on at intervals with a sense of narrowness of the chest. At the commencement of a paroxism cough difficult or suppressed, towards the termination of the fit the mucous expectoration becomes more free and copious, which last symtom generally relieves the patient for a short time.

Various have been the opinions concerning the cause of Asthma, Dr. Cullen" supposes the proximate cause of this disease is a preternatural and in some measure, a spasmodic constriction of the muscular fibres of the branchia. But this opinion has been of late contradicted by modern writers, and I Join them in the opinion of the disease depending upon a Plethoric state of the system, whose proximate cause is a preternatural fulness and turgescence of the Pulmonary vessels.

Having spoken of the Proximate cause of Asthma, It will be necessary to enumerate some of the most prominent exciting causes. All causes that debilitate the lungs act as an exciting cause. Ill treated Pneumonia and Catarrh, external heat, whether of the weather or of a warm chamber, the warm bath particularly will produce the disease, that external heat acts as an exciting cause is admitted by all modern Nosologists. And this fact in my opinion, goes to prove, that the disease does not depend upon a spasmodic constriction of the muscular fibres of the bronchia (as is supposed by Dr. Cullen) different vicissitudes of the weather, as alternations from heat to cold, or from a heavier to a lighter atmosphere, compression of the blood vessels by ligature or otherwise, any increased bulk of the Stomach by a full meal or a collection of air in it, will excite the disease, or whatever will increase or hurry the circulation viz violent passions and emotions of the mind. Dyspnea is sometimes confounded with, or mistaken for asthma. We may distinguish the latter from the former, by its periodical

appearance. The causes of Dyspnœa being more constantly applied produce therefore a more constant difficulty of breathing. There may be however some fallacy in this matter, as some of those causes may be liable to have their abatements and intensities whereby the Dyspnœa produced by them, may seem to come by fits. But I believe it is seldom that such fits put on the appearance of genuine Asthmatic fits. It has been supposed that a combination of exciting causes (refered to the Genus Dyspnœa) may have the effect of producing a paroxism of Asthma. This effect would take place in none but the peculiarly predisposed to the disease. Asthma is often a hereditary disease Dr. Cullen observes it hardly ever appears early in life, nor seldom untill the age of puberty. But in this opinion the Doct. is wrong, as modern practitioners have seen the disease make its appearance in children six Years of age. Neither age, sex, or temperament are exempt from it. Whenever persons are once attacked with the disease, and it continues to return for a length of time, it generally produces emaciation of the whole body.—

The attacks of Asthma are generally in the night or towards the approach of night, but there are also instances of its attack in the course of the day. At whatever time the disease makes its appearance, it is for the most part suddenly, with a sense of tightness across the breast and a sense of Straitness of the lungs, impeding inspiration. The person thus attacked can't remain in a horizontal situation, and is compeled to resort to an erect position, and requires a free and cool air. The difficulty of breathing for a time is increased, and both inspiration and expiration are performed slowly attended with a wheezing noise. In violent paroxism it is with the utmost difficulty the patient can speak there is often a propensity to cough but it can scarcely be effected. These symptoms continue for some time, when a remission takes place by degrees, the breathing becomes less laborious and more free, so that the patient can speak and cough with more ease, and if the cough brings up mucous, the remissions become immediately more considerable, and the patient falls into a much wished for sleep which he has been a stranger to, for the last preceding hours.

During a paroxism of asthma, the pulse for the most part continues regular, except in persons far advanced in Years, when you will find generally some irregularity. On the approach of a fit the face of the patient is flushed and turgid, with a slight protrusion of the eye balls, sometimes accompanied with heat and thirst. The urine if voided is profuse in quantity, with but little colour or odour. After some sleep in the morning, the patient is releived for some part of the day, his breathing becomes more free and easy, but not entirely free from tightness acros the breast, and can't enjoy a recumbent position without aggravating the symtoms. Generally in the afternoon the patient complains of unusual drowsiness and flatulence of the stomach, which symtoms are indicative of a returning attack of the disease. But whether these symtoms return or not, the difficulty of breathing returns in the evening, and gradually increases, till it is, as violent as the night preceding, or if during the day the difficulty of breathing

has been moderate, and the patient gets some sleep in the four part of the night, he is however waked between midnight and morning, and is then suddenly seized with a fit which runs the same course as the night before. In this way fits return for several nights successively. After some nights in this way, the fits suffer more considerable remissions. This especially happen when the remissions are attended with more copious expectorations in the mornings, and continues throughout the day. In these circumstances Asthmatics for a long time after, have not only more easy days, but enjoy also nights of entire sleep without the recurrence of the disease. When this disease, however, has once taken place in the manner above described, it is ready to return at times for the whole of life after. These returns however, happen with different circumstances in different persons. The asthma, tho often threatening immediate death, seldom occasions it, and persons have lived long under this disease. In many cases, however, it does prove fatal: sometimes very quickly, and perhaps always at length. In some young persons it has ended soon, by occasioning a Phthisis Pulmonalis. After a long continuance, it often ends in Hydrothorax; and commonly, by occasioning

some aneurism of the heart or great bloodvessels, it thereby proves fatal. We come now to speak of the Cure of asthma which naturally divides itself into two kinds viz. that which is necessary during the existence of a paroxism. And that which is suitable during the interval. It is seldom that this disease has been entirely cured. I therefore cannot propose any method of cure, which experience has approved as generally sucessful. But the disease admits of alleviation in several respects, from the use of remedies. And I shall now offer a few remarks upon the choice, and use, of the remedies, which have been commonly employed in cases of asthma. As the danger of an asthmatic fit arises chiefly from the difficult transmission of blood through the lungs threatening suffocation, so the most probable means of obviating this, seems to be blood letting. And therefore in all violent fits, Practitioners have had recourse to this remedy. In first attacks, and especially in Young and plethoric habits

Bloodletting should be our chief dependence; but even in old persons who have been frequently attacked the use of the lancet will be found necessary. Should venesection be inadmissible, we should try to promote and bring on expectoration. To effect this, various remedies have been resorted to. Should we wish to determine to the surface Tartarized Antimony or Specacuanha in nauseating doses will be servicable, Gum amoniac Powdered Squills combined with Nitre are advised. The Radix Seneka in powder is highly spoken of by some practitioners, it may also be used in decoction which I think the most proper form, bathing the feet in warm water on going to bed and taking a tea spoon full of Asafotida will act as an excellent expectorant. Opium so highly spoken of in this disease, has not been found so successful in the hands of modern practitioners, I think it might be given to patients who have suffered numerous attacks of the disease, and are left in a debilitated state, however, it may be exhibited as the Practitioner deems expedient. Smoking has often afforded relief the leaves of the Datura Stramonium in form of tobacco are very favorably spoken of by all, or the most of practitioners

As remedies during the interval, for the prevention of Asthmatic paroxisms, Tonics, are alone or cheifly in vouque. altho we are not sensible, of any of them, being specifically applicabable in this complaint. should the patient be of a plethoric habit he should confine himself to a spare, but nutritious diet, one easy of digestion, avoiding all flatulent vegetables, ardent spirits, wines, and malt liquors, tea and Coffee are also forbidden, flannel should be worn next the skin and never neglected. Exercise without fatigue should always be kept in view. Rideing in a carriage, in some instances is to be prefered. But rideing on horseback is preferable to all modes of gestation, with the exception of sea sailing. Patients laboring under asthma ought to emigrate, as the happiest effects have been known to result from a change of climate. As a tonic in this disease the oxyd of Iron in dose of 20 to 30 grains, combined with 2 or 3 grains of Ginger has been found very succesful in the hands of Dr Rush."
Blisters can't be permanently usefull in this disease Setons and Issues should be prefered. and in all cases

of obstinate asthma, where the disease manifest a disposition to return, after the usual remedies have faild to succeed, the use of Setons or Issues have produced the most desired effects.

A

Dissertation

On the Subject of Digestion
Submitted to the attention
of the Provost
and
Professors in the
University of Maryland
For the Degree of Doctor
of Medicine

By

John Frazier jun^r
of Kent County Maryland
Member of the Medical Society of Maryland
and Member of the Medical Society of Baltimore

To the
Professors of Medicine
In the
University of Maryland
the following
Dissertation
Is
Dedicated
In testimony of their kind attention to
the Author
During his attendance on their
Lectures

1820

A Dissertation

Introduction

In complying with the requisitions of the Laws of the University of Maryland and feeling conscious of my want of ability to range through the Science of Medicine - or offer any thing new. I have selected an humble path. - - -

When we take a survey of the science of which we are the votaries, and behold its universal diffusion over the civilized world - and especially when we contemplate the benign object of its institution and the many obstacles the first Fathers of the art had to surmount for its promotion - we cannot help perceiving the necessity of our having a correct knowledge of its principles deeply en-

graven

graven upon our minds. With what emotions of pleasure and delight do we listen to the Physician the Man of Science who conveys extensive & lasting blessings to Mankind . . . . . .
Every age is distinguished by some new doctrine which has its origin from facts discovered (the best datta) and the immutibility of truth will ever remain, when the ravages of Time shall have destroyed every vestige of error ---
But let us look back for a moment to antiquity there we behold those fallacies which the intervention of years enables us more destinctly to discern - Since those clouds by which they were surrounded are removed, we cannot help being struck with wonder and astonishment at the incorrectness of their Ideas. Yet the science is majistically pointing in prospective to future Ascendancy.

Digestion

In this age of improvement when the science of Medicine is advancing to perfection with a degree of rapidity unparallelled in any former period - we think it would be superfluous and a waste of Time to comment largely on the insufficiency of the explanations of some writers on this subject - who were disposed to view it either as Chymical Fermentative or Putrefactive .....

Digestion is that function by which the articles of Nutrientia taken for food and submitted to the action of a peculiar System of organs - change their qualities and form a new compound - suited for the purposes of nourishment and growth. One of the most striking Phenomena observable in living Bodies, is the constant motion of

decomposition and composition which is perpe=
tually going on in all their parts. the solids
and fluids are agitated by a perpetual move=
=ment, which extends to every fibre and mi=
=nute part of the frame — it is evident a dis=
=solution of the whole system would necessarily
follow were not the destructive effect of this
motion, compensated by an equivalent power
of reproduction — The Pulmonary exhalations
the sensible and insensible perspiration the
secretions of saliva, bile, urine &c. the sol=
=ids and fluids taken up by the absorbents from
every part, amounting to several pounds
every Day. shews the necessity for nutri=
=ment to keep up a healthy action through the
circulating medium — through which the demand
of the system is supplied — — — — — — — —

Although we view the Stomach as the principle organ of Digestion, yet the changes which takes place, on a series of reproduction, will induce us to take a cursory view of those changes through the whole Digestive apparatus —— The want of food is announced by an active and imperious feeling, which we call hunger when it regards solid food and thirst when its object is liquids — and as animal Life could not be long continued without a supply of nutriment we are incited to take this by the pleasure attendant on the gratification of our natural wants — which pleasure is always increased in proportion to the necessity of gratifying them; The pampered palate of the Epicure can hardly be roused — while the Ploughman feels a relish for common fare — we might observe

the admonitions of Hungar are more pressing in robust individuals - who are engaged in laborious exertions in the open air - who consequently experience a greater Daily loss - Thus the necessity for the Laborious and children to indulge most freely in Diet - fatigue dissipates in the former what is applied to purposes of Growth in the latter

We should far exceed the limits of a common Dissertation were we to give that attention to all the varieties which are essential and immediately concerned in the process of Digestion and as our Sketches will only appear before Medical Philosophers, we shall notice what we think most important on the present occation

Viewing the Child as the Man in Miniature

possessing all the common functions as soon as he breathes the vital air, He is subject to those laws which govern the Animal economy - Respiration being essential, without which Digestion never could commence, prepares the subject for aliment — Aliment received masticated and mixed with the saliva is fitted for its passage through the esophagus to the stomach, it there seperates the parietes of that organ which are always contiguous in its empty state the stomach yields to the distention without reacting — yet it seems not to be entirely passive - or at least its coats apply themselves by a kind of tonic movement to the accumulating matter — the Gastric juice secreted by this organ acts upon the food and prepares it for a further process in the Duodenum.

The Stomach has been regarded as the chief organ of Digestion yet it seems in fact to perform only a preparatory office - and not to accomplish the grand and essential phenomenon of this function. What is the action of the Stomach on the food? Various opinions have been framed in order to answer this question - The Ancients in general considered Digestion as effected by Coction, while the partizans of the System of fermentation have recognized in the food when received into the Stomach a spontaneous intestine motion by virtue of which it passes into a new order of combination, As we would accelerate the fermentative process by adding to those substances which are undergoing it, a portion of the same matter that has already fermented - Some others have supposed a sort of leaven

constantly existing in the stomach formed by a subtile acid or consisting of a small portion of food remaining behind from the preceding Digestion

We conclude that the nature of Digestion was imperfectly understood when this explanation was given and to suppose it to be a putrefactive or spontaneous change of the animal and vegetable food is a point satisfactorily confuted by Spallanzani Hunter and other Physiologists who have found that putrid aliment when taken into the stomach accidentally or given designedly to animals has lost its putred character previous to its Digestion – That substances are reduced to the state of Chyme in the stomach in a short time is evident from the demonstration of Spallanzani who exclosed different kinds of food in tubes

and balls full of holes in such a manner as to screen the food from the action of the stomach He found that these substances after having remained a sufficient time were converted into Chyme just as if they had not been enclosed in such tubes The formation of Chyme is owing to some peculiar process taking place in the stomach and is produced by the action of a liquid secreted by the stomach acting by laws peculiar to it self - The Gastric juice is probably poured out most freely when the presence of food in the stomach invites an afflux from its numerous Tubes - We admit the Gastric juice and villous coat of the stomach does possess qualities peculiar to its self yet however powerfully the gastric juice may act in dissolving alimentory substances it

does not affect the stomach itself we think it contrary to reason and common sense and certainly contrary to the laws of the animal economy for any fluid secreted by an organ to act as a stimuli upon such organ -

Dr Fordyce in his Treatise on Digestion argues against the opinion which ascribes digestion to any solvent fluid secreted by the stomach and appears to consider it as a Chemical process affected by the living powers of the stomach He observes that the substances employed for food yeild the same elements on analysis as chyle and that food and chyle differ only in the mode of combination of these Elements. Digestion he says, is performed on substances containing all the elements of chyle these substances in the stomach and other organs

of Digestion have their elements seperated from one another by the effects of the stomach and other organs of Digestion acting upon them occationing in them a decomposition and recombination of their Elements into a new substance

We admit that Elementary principles are contained in food yet those principles are completely changed by the process of Digestion and that Chemestry has nothing to do in Animated organised Matter. Fixed laws govern each organ of the System and they perform their office independant of Art — the Gastric fluid terminates as such, with life and although the fluid of the stomach when Dead may Chemically act and destroy the stomach — yet we cannot view this organ when under the free and

continued action of the nerves on which Digestion depends, as a Chemical vessel

The food being prepared by the act of deglutition passes through the oesophagus into the organ of the Digestive process is digested and by the peristaltic motion is urged towards the pylorie orifice - Having suffered the first degree of assimilation quit the stomach pass into the Duodenum and there undergoes a very considerable change - The Duodenum has by some been considered as a second stomach by its magnitude and more particularly by its receiving the Pancreatic and Biliary secretions - These mixing with the chymous mass animalizes it, a change is produced The Chyle seperates from the excrementitious part. this nutritive liquor is

absorbed by the lacteals and conveyed by them into the sanguiferous system, while the gross part of the bile mixing with the excrementi=
=tious part of the chylous portion imparts to it those stimulating properties by which means it excites the action of the alimentary Tube. We might here remark that the united agencies of the stomach and intestines do not always succeed in changing the various matters submitted to their action owing to the quality or the quantity be=
=ing too gross or great which often produ=
=ces a deleterious effect — The effect produced by the intestines in the function of assim=
=ilation like that of the stomach is a liv=
=ing action. explicable only by means of the vital powers — These regulate and modify

the changes and combinations of the food and hence the fluid extracted from the aliment possesses a specific character derived entirely from the properties of Life – The mixture of saliva Gastric juice Bile and pancreatic liquor with the food out of the Body would never form Chyle

The Chyle being seperated from the excrementitious matter is taken up by the lacteals of the Duodenum jejunum and intestines –

The Digested mass in its passage through the intestines is by the numerous curvatures of the canalt is retarded and expressed by the peristaltic contraction of the intestines is repeatedly presented to the inhalent orifices of the lacteals which are verry numerous particularly on the surface of the

small intestines the food is gradually accel-
erated in proportion as its nutritive parts are
absorbed - the mucus secreted by the large
intestines is most abundant, it facilitates
its transmission when aided by the vermi=
=cular motion which takes place this moti=
=on from above downward prevails at last
and the system is freed from that which
is no longer beneficial - being deprived of
those nutritious principles which it ori=
=ginally possessed

The united efforts of the Chemist and Physiologist
have not eventuated in giving all the satis=
=faction we could wish in their account of
the properties and character of Chyle

As we have stated that the chyle is that
substance by which the whole system

is resuscitated and that it possesses all the Elementary principles necessary for that purpose We shall proceed to show the medium through which it has to pass in order to get into the General circulation

The lacteals are extremely numerous on account of the function which they have to perform - the course of these vessels is through the mesentery they communicate or enter numerous glands as they approach the superior mesenteric Artery and unite about the eighth lumber vertebre in one common trunk the thoracic Duct this duct passes up a longside of the Aorta until it gets above the Arch when it leaves the spine and inclines to the left side to reach the left subclavian vein in

which it is to terminate it passes beyond the vein and again descends and empties itself into the venous System at the angle made by the junction of the internal jugular and axillary vein as they unite to form the left Subclavian vein. Thus the Chyle enters the sanguiferous System and being received assoon as it enters the vena cava Into the right Auricle of the Heart passes into the right ventricle then into the pulmonary artery into the lungs where it is converted into Blood reenters the Heart through the medium of the pulmonary veins is received into the left Auricle then into the left ventricle which contracts and forces through the Aorta to every part of the System that fluid by which the Body is resuscitated.

An
Inaugural Dissertation
on
Hectic Fever;
Submitted before
the Right Revd James Kemp D.D. Provost
and
the Regents
of the
University of Maryland,
For the degree of
Doctor of Medicine,
by
John Kennedy,
of
Baltimore

1820.

A Dissertation on Hectic Fever

Hectic fever, which I have chosen as the subject of my dissertation, is a disease, concerning which, there has been, and is still, much difference, in opinion, as respects its proximate cause.

I have selected this subject, not because I can throw much light upon it, but in compliance with an established law of the University, which makes it obligatory on a Graduate to prepare a thesis for public examination. In the following sheets, I am aware much will be found inaccurate as to the style, but as respects the opinion which I endeavour to support, viz. of the proximate cause of hectic fever, I think facts warrant the conclusion I have drawn.

Hectic fever is a disease which accompanies some local affection of the body; it comes on with chills about 12 o'clock in the day, has a remission about four or five, in the afternoon, and an exacerbation from that time, untill about midnight, when it goes off with copious sweats.

Dr Cullen, in his chapter on Phthisis Pulmonalis, gives the following accurate description of the symptoms of hectic.

He says, "A Hectic fever has the form of a remittent, which has

"exacerbations twice every day. The first of these occurs about noon, sometimes a little sooner or later, and a slight remission of it happens about five in the afternoon. This last is soon succeeded by another exacerbation, gradually increasing till after midnight; but after two o'clock of the morning, a remission takes place, which becomes more and more considerable as the morning advances. The exacerbations are frequently attended with some degree of cold shivering, or at least the patient is exceedingly sensible to any coolness of the air, seeks external heat, and often complains of a sense of cold, when, to the thermometer his skin is preternaturally warm. Of these exacerbations, that of the evening is always the most considerable. It has commonly been given as a part of the character of a hectic fever, that an exacerbation of it commonly appears after the taking food; and it is true that dinner, which is taken at noon or after it, does seem to occasion some exacerbation. But this must not make us judge the mid-day exacerbation to be the effect of eating only; for I have often observed it to come on an hour before noon, and often some hours before dinner; which in this country at present, is not taken till some time after noon. It is indeed to be observed, that in almost every person, the taking food occasions some degree of fever: but I am persuaded this would not appear so considerable in a hectic, were it not that an exacerbation of fever is present from another cause, and accordingly, the taking food in the morning has hardly any sensible effect. The fever I have described does not commonly subsist long till the evening exacerbations become attended"

the sweatings; which continue to recur and to prove more and more profuse, through the whole course of the disease. Almost from the first appearance of the hectic the urine is high coloured, and deposites a copious brandy red sediment, which hardly ever falls close to the bottom of the vessel. In the hectic, the appetite for food is generally less impaired than in any other kind of fever. The thirst is seldom considerable; the mouth is commonly moist; and as the disease advances, the tongue becomes free from all fur, appears very clean; and in the advanced stages of the disease, the tongue and fauces appear to be somewhat inflamed, and become more or less covered with aphthæ. As the disease advances, the red vessels of the adnata of the eye disappear, and the whole of the adnata becomes of a pearly white. The face is uncommonly pale; but during the exacerbations, a florid red and an almost circumscribed spot appears on each cheek. For some time, in the course of the hectic, the belly is bound; but, in the advanced stages of it, a diarrhœa almost always comes on, and continues to recur frequently during the rest of the disease, alternating in some measure with the sweatings above mentioned. The disease is always attended with a debility, which gradually increases during the course of it. During the same course an emaciation takes place, and goes to a greater degree than in almost any other case. The falling off of the hairs, and the adunque form of the nails, are also symptoms of the want of nourishment. Towards the end of the disease, the feet are often affected with œdematous swellings."

The exacerbations of the fever are seldom attended with any head-ach, and scarcely ever with delirium. The senses and judgement commonly remain entire to the very end of the disease; and the mind, for the most part is confident and full of hope. Some days before death, a delirium comes on, and commonly continues to the end."

Remote Causes.

Predisposing— Any thing that debilitates the body, and has a tendency to produce a laxity of the system, disposes the patient labouring under an ulcerative affection of some part of the body, to Hectic fever

Exciting— Any considerable irritation of body, or great anxiety of mind— free, full or stimulating diet [when the necessary primary disease exists] will excite Hectic fever at a more early period in the progress of the primary affection, than if those things had been avoided.

Proximate Cause.

Respecting the proximate cause, as I said before, there has been a great variety of opinion. Among the ancients the immediate or proximate cause was supposed to be an acrid or putrid state of the fluids. "An acrimony absorbed from abscesses or ulcers" untill lately was supposed to be the cause. An opinion though supported by the authority of Cullen, as absurd almost as the relics of the humoral pathology. This opinion has been rejected by Read for an hypothesis far more absurd and more difficult to

understand, viz. that a suppression of the discharge from the lungs is the immediate cause of the disease. To judge from this opinion of hectic fever he supposes that it could only exist from an affection of the lungs; but we see ulcerative affections of the extremities and many other parts situated far from the lungs and connected to them by no particular sympathy, exciting hectic in its worst forms, and if the primary affection cannot be removed, causing death by insomnia, colliquative diarrhea, and sweats.
The opinion, which from an attentive observation of the disease, I am disposed to adopt, is, not that it depends on a change in the qualities of the fluids — nor that it depends on the absorption of a purulent acrid matter — but, that it arises from the irritation of the whole system, produced by some local disease, and I am disposed to consider that disease as an ulceration of some part of the body. This is the opinion advanced by Mr. John Hunter and I think will stand the test of time and experience. He says "that hectic fever is an universal sympathy, with a local disease, which the constitution is unable to overcome". "Universal sympathy takes place, when the whole body in a great measure sympathizes with the disease which was at first confined to some one part of the body, Thus, when the inflammation of any wounded part is gone, but the part still remains in an ulcerous state the constitution is teased, and this teasing is the principal part

of what has been called Hectic Fever.

To substantiate this opinion, the principal points which appear to be necessary for me to notice, are the following; by the intermedium of which, if I fail in supporting the doctrine, that hectic depends on the irritation of ulceration or a "Vitiated purulency", I hope it will not be attributed to the erroneous or false nature of the opinion which I support, but rather to the smallness of my ability in elucidating the fact or weakness of judgment in pointing out sufficient proofs.

1st That Hectic is not a primary or idiopathic fever.

2d That it arises from some local irritation.

3d That this irritation depends on ulceration.

4th That the remote causes act by exciting ulceration.

5. That those cases are erroneous, which are generally forward as proofs that Hectic can take place without ulcerative or vitiated suppurative action.

1st That Hectic is not a primary or idiopathic fever, I shall only have to refer to authority to prove. Hoffman affirms that Hectic fevers are generally symptomatic of considerable suppuration in some of the viscera, and boldly asserts that it is impossible for hectic to occur without some primary ulcerative affection. Dr Cullen a most acute nosologist and a man of extensive and weighty experience, does not rank this kind of fever as a genus, but considers it always symptomatic. He says, in Sect. DCCCLVIII. "he never saw a case of hectic, in which there was not evidently, or when he had not ground, to suppose

there was a permanent purulency or ulceration in some exter
nal or internal part." He constantly found it a symptom of
some topical affection.

2nd That it arises from some local irritation.

If it be admitted that Hectic is not an idiopathic fever we
directly infer that it must be symptomatic of some local or
general disease - of its depending on the former we have many
proofs of the latter none - If authority was needed I might
bring almost all physicians, that ever saw the disease, to prove
that it depends on local irritation. The doctrine that Hectic
is a primary fever & arises from other causes than local irrita
tion, has done great harm, it has turned the attention of the
physician to the treatment of the fever, instead of the local
affection. By treating the fever the strength is quickly destroyd
the local disease irritated and exasperated which quickens
the pace of death. The case of Hectic fever arising from an
incurable disease of the extremities, most undeniably proves that
it depends on local disease; all the symptoms cease immediately
the ulcerated limb has been taken off. A hectic pulse of 120
strokes has been known to sink to 90 a short time after
the removal of the hectic cause, persons have been known
to sleep tolerably, the night afterwards, who had slept
very little for weeks before, delirium - colliquative purg
ing and sweats have immediately ceased.

3d That this irritation depends on ulceration, is fully proved by a general history of the disease: there are no cases in which there cannot be traced some ulcerative affection, after death, in some part of the body, either enlarged mesenteric glands, tuberculous lungs, or suppuration in some other organ. Morgagni a man of great experience and extensive dissections affirms that on dissecting patients who died of Hectic fever, there were found abscesses in one or other of the viscera, ulcerated tumors, whence Hectic is evidently a symptomatic fever depending on ulceration action. According to the seat and degree of the local disease will be the violence of the Hectic. That ulceration can exist in some remote part of the body without exciting Hectic, is admitted; this truth being acknowledged by me, might on a slight glance, be supposed to refute the doctrine of ulceration being the immediate and only cause of Hectic; but this would be an induction, I am, by no means, prepared to approve; for we frequently see slight catarrhal and other pulmonic affections exist, without inducing inflammatory or synochial fever — the reason of which is that the local phlegmasial affection is not strong enough to excite a general sympathy or synochial fever — The same reason holds good as to the case in question. — Like other symptoms of disease, Hectic in some instances, takes place sooner or later, after the existence of the primary affection, owing to several causes,

some constitutions having weaker powers of resistance than others, to the irritation of ulceration, must more easily fall into Hectic. When vital parts are diseased or in a state of ulceration, the constitution sympathizes more quickly and readily than with ulceration or diseases of some less vital part. And it is a common remark, that the same disease is generally more difficult to cure in vital than other parts.

4th That the remote or inducing causes act by exciting ulceration — to mention them will be sufficient — severe wounds — abscesses — all kinds of external injuries — severe salivation — preceding diseases, as small pox, measles, dropsy, intermittents — scrophula &c

5th That those cases are erroneous, which are generally brought forward as proofs that hectic can take place without ulcerative or vitiated suppurative action — The chief of these are Rheumatism — Chlorosis — Diabetes — nostalgia — and Osteosarcoma — of the first and last I shall say nothing. Diabetes, from its being sometimes accompanied by an obscure fever has been cited as a proof that hectic can exist independent of ulceration or formation of a vitiated purulent matter. From the symptoms of this disease, I have every right to declare, that, it is not a hectic fever. The pulse in Diabetes is very seldom more frequent than natural, in Hectic fever it is ~~never~~ less than 100 most

commonly 115 or 120. Again, there is a great thirst an arid state of the skin in Diabetes, In Hectic the thirst is seldom considerable and there is a continual colliquative sweat. Dr Darwin says that in Diabetes, the skin absorbs moisture, now the reverse of this is known to be the case in Hectic. Nevertheless, granting that the fever attending Diabetes is a Hectic, however cogent the reasons to the contrary; What is the current opinion of Diabetes? Is it not a general disease of the viscera? *Are not the kidneys affected with laxity and atony? Is there not a general decay and dilapidation of the whole glandular apparatus of the abdomen? Then who will say that there is not suppuration and consequently ulceration in some of the viscera? I believe with Dr Cullen, that the proximate cause of Diabetes is some fault in the assimila=-tory power. I do not however, believe as the Dr did and as Dr Rollo now does, that the fault is in the stomach; but, that it resides in that organ where digestion is completed viz. the lungs. I am supported, in this opinion, by a very common remark, that Diabetes is often preceded or accompanied by a pulmonic affe=tion, and this being the case, what then, becomes of the opinion of those, who say that Hectic can be produced by Diabetes, with=out there being any ulcerative action of the body. We are told by Dr Bardsley that in a great number of cases of Diabetes, which

* Cullen

he had under his care, he does not recollect an instance of the disease which was not attended with an ulcerative affection of the viscera of the thorax.

Chlorosis is another disease which has been brought forward as being a case where Hectic fever can exist without the ulcerative action. I shall be as brief and explicit as possible as possible, on this subject. In what stages of Chlorosis does fever ever take place? Is it not in the very lowest stage of debility? How does the disease terminate fatally? Is it not always by exciting some disease in one of the viscera? Whoever saw Chlorosis terminate in death, without the breathing being much affected, frequent cough, general emaciation, oedematous swelling of the lower extremities? What does this argue? Does it not look like a strumous taint? Where can be found a more correct statement of tuberculous lungs, especially when we consider that in most cases of Chlorosis, Hæmoptysis occurs, and when fatal Phthisis Pulmonalis closes the scene. Here also Hectic fever arises from irritation of the ulcerative action. Dissections have also shown, in those cases where death occurred from Chlorosis, the ovaria to be in a scirrhus ulcerative state. In most cases the liver, stomach, spleen and mesenteric glands have been found in a diseased state.

Nostalgia – Restlessness, anxiety and an apprehension of accidents occurring at home, with a great desire to be there, are what have been considered to constitute this disease. It would be useless for me to pretend to extend my arguments to prove that Hectic does not sometimes take place in this disease. But as it is a species of Mania or Melancholia, and as we know that those diseases after existing a considerable time, give rise to a constipation of the bowels and a local affection of some one of the viscera; we have a right to infer that the same thing takes place in Nostalgia, and we are also entitled to believe that the Hectic, in this case, arises from the irritation of ulceration. We have been told that persons have been affected with Hectic when labouring under Home Sickness, and that, when they were permitted to return, they immediately perfectly recovered. This is certainly merely chimerical, I cannot persuade myself to believe, that those persons laboured under Hectic fever.

Having endeavoured to prove, from the foregoing propositions, that Hectic is not idiopathic, that it is a secondary affection arising from local disease, and having attempted to prove, I hope with success, that this local affection is an ulceration of some part of the body, which produces Hectic by the irritation and disturbance which it excites in the system, having also noticed those diseases, which have been

mentioned by Physicians, as being cases where Hectic has occurred, without there being any observable suppuration in any part of the body, after an attentive examination of those cases, I can discover no circumstance to disprove the opinion I support, concerning the proximate cause of this disease.

It is an obsevation of Van Swieten in his commentaries on Boerhaave, that Hectic fever (In Phthisis) continues while the secretion of matter lasts, but when it ceases, the fever also ceases- thus, as he says, in Consumptive patients a slight fever invades the patient every day, while the matter is forming, but which fever diminishes when the formed matter is spit up. This observation of Van Swieten's admits of no doubt, and goes far in supporting the opinion which I am endeavouring to substantiate. I have said that the irritation of ulceration produces the disease, I now say, that the cause of the Repeated paroxysms and Regular exacerbations depend on the increase of the formation of matter This increase of the formation of matter showing an increase of action, this action increasing the irritation of the system necessarily causes an exacerbation of the Hectic. When this action has continued for several hours, the patient becomes very much debilitated, and exhausted, the

consequence of which is, that the violence of the irritation ceases and the fever diminishes by means of profuse sweating which is merely a symptom of the great degree of debility to which the patient was reduced by the preceding paroxysm. Thus, In the morning the patient is nearly free of fever, in a weak and debilitated state, he sleeps, and eats with some appetite, he accumulates a little strength; but, about 12 o'clock, the action in the ulcerated part of the lungs, begins to increase, the comfort of the sufferer diminishes, he becomes irritable coughs frequently, has great dyspnoea &c which proves an increase of irritation from an increase of excitement in the ulcerated parts, Presently, the fever rages and continues untill about midnight, by this time, the system of the subject, is reduced so low, that the action of ulceration, like Hemorrhages, ceases, from incapability of the vital powers to support it, sweating relieves the disease and the patient returns to the state he was in the preceding morning. The diarrhoea which accompanies this disease, is also caused by the irritability and weakness of the system, produced by this irritable action which attends ulceration.

Treatment. All I have to say on the cure of Hectic fever is that the primary affection must be removed. Where the ulceration is situated in one of the extremities, it should if possible be healed by the use of proper remedies. If this cannot be accomplished, the affected limb should be removed by amputation which affords the only chance of recovery. Where the Ulceration is seated in some of the vital organs of the body, which will not admit of removal or cure, the only thing that remains in our power, is to alleviate the most distressing symptoms and lessen the pain by remedies adapted to its violence. As this disease very soon produces great debility, it will be necessary to make use of nourishing & cordial diet, and as much exercise as the state of the patient will admit, ~~g~~estation is to be preferred, as least fatiguing. By these means though the primary disease cannot be removed, the life of the patient may be considerably lengthened, and the violence of his sufferings greatly diminished. ——

It would show a want of common gratitude, were I to close this essay without expressing my most sincere thanks to the Professors of this growing and valuable Institution, which I now wish them to accept as well as my wishes for their future wellfare and prosperity.

FINIS

An Attempt to Ascertain the Cause of the Extensive Inflammation Which Attacks Wounded Cavities &c.

By Samuel L. Roberts of Baltimore

1820.

An Inaugural Essay

for

The Degree

of

Doctor of Medicine

Submitted to the Consideration

of the

ight Revd James Kemp L.L. Provost

the

egents, and Medical Professors

of the

University of Maryland

Mare 16th 1820.

To the

Revd George Roberts M.D.

Respected Sir

I have dedicated this Inaugural Essay to you from motives of gratitude as well as duty for the favours and protection which you have so liberally bestowed on me, and although I am conscious it can add nothing to your fame or usefulness, it will discover to you the high sense which I entertain of both, and the obligations which I owe to you for your paternal care and instructions through every period of my Life

Permit me to unite my prayers with the supplications of many others, for the prolongation of that life which has been spent in the pursuit of a laborious Profession with no less honour to yourself than usefulness to others

I am
Respected Sir
with gratitude and esteem
your affectionate Son and Pupil

J. Roberts

Preface

It was my intention when I commenced this subject to have enlarged upon some particular points which appeared to me peculiarly interesting but for the want of time I have been obliged to be limited in my observations

I should feel myself considerably embarrassed in presenting it to you in this state, was it not for the consideration that you are all well aware of the insurmountable difficulties that present themselves in this our first advancement to Science.

Impressed with this belief I with some degree of cheerfulness present the following pages for your consideration fully confident that you will make every possible allowance for all imperfections. That I may have some expectation that by communicating those few but simple facts, I may have some reason to believe I've contributed a mite towards the improvement of my profession. But even this much I could not hope for were I to write a volume of Speculation. ——

J. Roberts

An Inaugural Essay &c.

he doctrine of air stimulating internal surfaces during so long a
iod almost universally acknowledged has been subjected to a close
d severe examination by some late writers. as just and weigh-
objections could be adduced against it. it has in some meas-
e been rejected. and attempts made by Mr Hunter. Mr Abernet-
y and Mr John Bell. each to substitute his own in place of

I feel the greatest respect and veneration for the talents of
ese gentelmen, and it is with great defidents that I presume
advance an opinion in favour of the opposite side of the que-
tion. but I perform the task with some what less reluctan-
ce as necessity not choice has compeled me to write.

I therefore have chosen this subject as it
eems to me from the small knowledge I possess of it to at
ast depend partly if not entirelly upon the effects of the
tmospheric air.

In in any cases of the emphysema, where the air is diffused over
he whole body. says Mr Hunter* we have no such effect as infl-
ammation— and this air not the purest, except there is produced an
xposure or imperfection of some internal surface. for this air
make its escape by, and then this part inflames. May, as a
trong proof, and of the same kind with the former, that it is
ot the admission of air, which makes parts fall into inflame

* Hunter on the Blood pol II page 98.

-mation, we find that the cells in the soft parts of birds, and many of the cells and canals of the Bones of the same tribe of animals, which communicate with the lungs, and at all times have more or less of air in them, never inflame; but if these cells are exposed in an unnatural way, by being wounded &c then the circumstances of imperfection, is given, and the cells inflame, and suppurate &c. all oised; but if prevented, they then suppurate granulate &c.

The first thing that Mr Hunter takes notice of in proof of his doctrine is the Emphysema, which he states not to produce inflammation, this so far is true, and in my opinion can do little in proof of his doctrine.

That the air escaping from the lungs and penetrating between the skin and muscles into the cellular or adipose membrane and then spreading over the whole body, perhaps not the nearest, does not produce inflammation, why, the reason seems obvious, although this air is not natural to these parts, still the system becomes in a measure naturalized to it, from its passage through the lungs, it having received more caloric than is natural to it, so that when coming in contact with those parts, above mentioned, its abstraction from them is not so great, having previously had its temperature raised considerably as above mentioned &c—

But if the same portion, May even a par less, of atmospheric air be injected, inflammation is the immediate result. the reason of this may be easily accounted for, on the principles here laid down, viz The air not only from its being unnatural to these parts, but also of a much lower temperature, an abstraction of heat from the surrounding parts in contact with it, takes place immediately on its introduction, and the parts are left in a state of debility, and of course predisposed to disease, so that when the

cause ("atmospheric air,) is removed, and the parts again brought to there natural position, an equilibrium of temperature is again established between there and the adjacent parts, this sudden change from a high to a low, and again from a high to a greater degree of temperature, it is natural to suppose that Inflammation should be the result &c.

Mr Hunter in the same chapter very correctly remarks "that the air communicating with the cells in the soft parts of birds and with those of the bones &c. does not produce inflammation, and in the very same chapter admits the doctrine which I've here laid down. stating that if those those Cells, Canals &c. are wounded and thus exposed then inflammation takes place, or in his own word, "If, says he, these cells are exposed in an unnatural way, (meaning I suppose the atmospheric air) by being wounded &c. then the stimulus of imperfection is given, and they Inflame,"

Mr Hunter perceiving difficulties arising, by no means favourable to his Theory, surmounts them all, by he supposes, by making use of the term, "Stimulus of Imperfection, a term to me entirely incomprehensible, unless he intended to convey the idea, that it is given by an intelligent agent, for from the manner in which he speaks, he must have viewed it, as arising from some power capable of deciding when such a stimulus is necessary, directing its efforts to the benefits of the system and insinuating such actions as are necessary to restore parts that are injured. If this doctrine were in every other respect satisfactory the introduction of this single term, which I am unable to familiarize to myself, by the substitution of any simple expression, would be

sufficient cause with me, for its total rejection But I am still more unwilling to admit Mr. Hunter's terms from a b[illegible] of the extensive injury, which Science might sustain fr[illegible] Theories requiring the aid of immaginary intelligence, to exp[illegible] in the operations of the humane body, both in Health and Dis[illegible] and words incomprehensible which have done Science no good themselves no honour and us no kind of benefit, but on the con[illegible]rary, They have paralized investigation, and appear to render superfluous, the Researches of the physiologist and patholo[illegible]ist, farther than, to trace causes to that point, at which these agents might be supposed to commence their actio[illegible] Thus instead of assisting to dispell the dark cloud which has for so long a time hung over some important parts of our Science, they have made it still more obscure and su[illegible] them still deeper into oblivion. [illegible] by make use of term unintelligable, to equal those seemingly ancious which have go on before, th[illegible]

The opinion which I have been induced to adopt is from the consideration of the temperature of our bodies (internal) being considerably above that of the surrounding atmosphere so that when a direct communication is made between the cavities of the body and the external parts the air which is ext[illegible]rnal to those parts, finding an inlet to those parts and being of a considerably lower temperature, it is obvious by a kn[illegible]wn law of heat, a reduction of temperature of the cavities must of necessity take place. Those cavities being uniform[illegible]ly accustomed to a heat of 98 degrees a reduction of that tem[illegible]perature

temperature by a number of degrees, which would have but little influence on the external surface, ever exposed to varying temperatures, may induce debility on the membranes lining the cavities, on which I suppose inflammation to follow on the same principles which have been mentioned. I also think that there can be no doubt, that the redness, which is observable on the skin of infants a few hours after birth, to be a slight degree of inflammation, and think the sudden change of temperature, to which they have been subjected, is obviously the cause of it. this I think may be urged as one proof among many to support the stand I've taken.

This doctrine becomes still more impressive when we contemplate on the inferior orders of the animal creation and als of the vegetable kingdom. All those vast number of animals which go into the state of torpor, strongly evinces the extensive prevalence of a principal which is begining to be generally understood and admitted, which is that animal matter becomes more sensible to its ordinary stimuli after they have been diminished or with held for some time.

It is well known that if we are deprived of animal food for some time that it will when resorted to again produce an effect similar to spirituous liequors, upon persons unaccustomed to its stimulating effects. at least from examples which have come on record we are induced to addopt the opinion, there

case of this kind related of the ship's company of Captain

Blight who felt the symptoms of intoxication from eating Oysters. and some berries of an innocent nature after they had for several days eaten a very small portion of food. An other case is related by Dr Percival of a young physician of Geneva who when a student at Montpelier fasted for the space of three days after which, the first nourishment he took was veal broth, and that had an intoxicating effect on him.

We have other examples of this kind as before hinted at, in the lower order of animals. We learn on the authority of Fontana that eels which during the winter had been kept at the temperature of 59 degrees, were destroyed in two minutes by exposing them suddenly to a temperature of 67 degrees; which is very far below that, which they easily bear and in which they are in full vigour during the summer. This fact is clearly in favour of the opinion, that cold has had the effect, on these animals of rendering them infinitely more sensible to the stimulus of heat, than they were before they had been exposed to cold.

The abbe Spalanzani observes, that newts conceal themselves in the earth and become torpid in the in the month of October, when the thermometer generally stands at 54 degrees; after remaining several months in this state, they re-appear in February, when the degree of heat is much less than at the time of their becoming torpid, whence there is no physical necessity from the constitution of those animals requiring

there to go into this state of torpor. and has been ascertained
that those same species of animal will be subject to become torpid
in one climate and not in another. They require a certain quan-
tity of heat to keep them active, and this must be larger at the
close of summer, than they can bear at the commencement of spri-
ng, furnishing one of innumerable instances, in which it is obvi-
ous, that living matter becomes less sensible to stimuli which
are frequently repeated. But if those animals are kept in a
warm temperature, they remain active clearly proving that in
this state of torpor is owing to a defect of heat and. The change wh-
ich takes place in the time of torpor, appears to consist in
their acquiring a capacity of having perfect life supported
by a less quantity of heat. By which, I mean, the excitab-
ility of these systems has been accumulated that great act-
ion may be produced in them by a slight stimulus. These
strangers are not confined to the animal, only but extends its-
elf also to the vegetable kingdom.
I introduced these two simple facts as they seem clearly to prove the
effects of atmospheric air upon the human body under certain
circumstances, as before stated. ——
From this view of the subject I've been induced to believe that if
attention was more strictly paid to the temperature of the room
in which certain important operations were performed.
they would be attended with greater success. I would menti-
on the Cæsarian, Election, as having here to fore been attend

* Professor Barton's Lectures.

attended with so little success. that it has been looked upon by some as attended with as much, if not more danger than the disease itself. For from the numerous cases in which it has been performed, there are comparatively few wher it has proved successful and those which have been performed under circumstances similar to those here laid down viz in Climates which were extremely warm.

I think for my owne part that this operation should be attended with as little danger as any other provided the temperature of the room was attended to. a striking instance of this may be seen in a case related by Doctor Moseley which occured in the west Indies a young negro woman, who was in labour becoming impatient of the pain which she suffered, conceived the idea of relieving herself in summary ways and with a common knife made an incision into the abdomen and uterus, through which the child was delivered. The Intestines which had protruded through the wound, were replaced along with the placental portion of the funis, by some person at hand, and a stitch or two were put into the wound. the Medical attendant, who soon after arrived suspecting that some dirt or other matter had been thrust into the abdomen along with the Intestines, took them out, examined and cleansed them, and at the same time extracted the placenta through the wound. This patient recovered although

very circumstance conspired to make the case peculiarly violent
and there can be no doubt that this success was owing, not to
chance, but entirely, to the heat of the weather in that climate
increased probably by a still more heated cabin.

There is also a case related by Mr John Bell of a Soldier ~~bein~~
being wounded in the side by a halbert, afterwards walking
a mile with his intestines hanging out wrapt in the skirts of
his shirt and deposited in his hat; the roads were dusty, and
the intestines dry as parchment and black with dust, when
he obtained the assistance of a charitable old lady, who
bathed them in warm milk and replaced them. It must be
observed that the weather it being mid-summer was intensely
hot. here it appears that neither the dust combined with
other irritations, were capable of exciting a fatal Inflam-
mation, which I think would have been the consequence of
exposure, so long continued, to a lower temperature.

Having performed this duty, one still remains
to the Medical Professors of this university, for the usefull instructions
I have received from their valuable Lectures. I return my most grate-
ful thanks, and that each of you Gentlemen may long enjoy
that honour and happiness which you so deservedly merit, from
your indefatigable exertions in the promotion of useful knowle-
dge, is my most fervent wish.

And may this University ever continue to prosper, while those

around her, are sinking into decay and ruin, may she continue to be able to surmount all obstacles that may prevent themselves, and continue to give examples to others as she has to me, how many useful lessons, how many reflections, affecting and profound, are suggested to the mind which knows how to appreciate her worth, yes this with in her walls thus we are taught, to cherish in remembrance the love & science to employ ourselves on the means of effecting good for her and to build our own happiness on the promotion of hers.

An
Inaugural Dissertation
On
Emetics,

Submitted to the Consideration
of
The Right Revd. James Kemp, Provost,
and of the
Regents of the University of Maryland,
By
Robert Posey of Edwd.
Baltimore County Maryland.

March, 1820.

To

Col Ezekiel John Cosey

Baltimore County Maryland

Dear Sir,

I should do injustice to myself, had I not with pleasure to embrace so favourable an opportunity of declaring my obligations to you, for the kind instructions I received from you, whilst your pupil; and the desire you have ever manifested for my advancement: obligations whose remembrance will ever afford the most heart felt pleasure and which will cease but with life.

You will please accept this; as a mark of the high esteem I entertain for you, and my most sincere wishes, for your health and happiness.

yours sincerely

Robert Cosey

To

Doctor Ashton Alexander

Baltimore

Dear Sir.

At this the moment of our separation, were I not to make some declarations of the high regard I entertain for you, I should do an injustice to myself: The instruction and advantages I received from you, during the completion of my studies, have made an impression on me, which nothing can efface.

As a testimonial of my respect, permit me, to proffer to you, this dissertation, with my most ardent wishes, for your future prosperity and happiness.

Your Respt. Student

R Dorsey.

Not desirous, of entering upon any unsettled or speculative Physiological question; I shall content myself, by making some remarks upon Enteritis, or an inflammation of the Intestines; which, from among the innumerable variety of interesting subjects that necessarily present themselves, I have chosen for my consideration.

It is almost unnecessary to remark, that the subject is generally so well understood, that from me, nothing original should be expected.

Enteritis is derived from the Greek and signifies an Intestine. It is divided into two species; phlegmonous and Erysipelatous: at present I shall confine myself to the consideration of the former species.

It may easily be distinguished from Colic, the only disease with which it is likely to be confounded; by paying some attention to the following symptoms: Enteritis is generally

accompanied with fever, a quick, small and hard pulse, and when pressure is made on the abdomen, there is great augmentation of the pain: this circumstance does not take place in Colic.

Enteritis may be occasioned, by acrid or irritating substances; Indurated faces; Obstinate costiveness; drinking large quantities of cold water; fermented liquors; corrosive poisons; acrid Emetics or Cathartics; the Gout; and a very general cause, is, the application of cold to the inferior extremities. Persons advanced in years are most subject to the attacks of this disease, and are extremely liable to relapses.

It generally commences with an acute pain usually extending over the whole of the abdomen; but more particularly around the navel, (some practitioners de=

=scribe it, as confined to a particular part of the Intestines, where the pain being situated, the greatest inflamation is supposed to be) which is greatly increased by pressure: there is great heat of the intestines internaly; anxiety, vomiting, great thirst, watchfulness, inquietude, restlessness, coldness of the extremities; difficult respiration; and a quick, small, and hard pulse. after a short time, there is a considerable increase of the pain; the bowels become spasmodically affected, and the least pressure on the abdomen produces the most excruciating pain; great costiveness now prevails, and considerable difficulty is experienced, in voiding the urine.

If the Inflamation should continue with much violence; it must terminate in resolution, suppuration, or in

gangrene. Enteritis is always attended with considerable danger; as, from the time of its attack, it often terminates in a very short time, in gangrene — this is obviously evident, from a cessation of the pain, failure of the pulse, suppression of urine, and distention of the abdomen. If there should be a gradual abatement of the pains, the feces become natural, and a universal diaphoresis, with a firm equal pulse, we may calculate on a favourable termination. When it terminates in ulceration, which is very infrequent, it may be ascertained by the remission of the febrile symptoms, and by the alvine evacuations being mixed with pus.

I shall now enter upon the cure of the disease; and altho I shall not advise

any thing, which has not been made use of, I will enforce those remedies which to my mind, should claim the greatest attention. In the commencement of the disease, bene section should be made use of and had recourse to, as often as the violence of the symptoms require; always taking into consideration the age and strength of the patient. If the stomach should not be in an irritable state he should procure an evacuation or two by some gentle laxative given per os. But on the other hand, if on account of the Irritability of the Stomach, the above remedy should be injudicious; we must then make use of Emollient Clysters and also fomentations and Cataplasms. The application of a blister to the part affected is a valuable remedy; small doses of Nitre and Camphor have been recom=

mended by Home; from experience, I can say nothing of this remedy, but have no doubt of its propriety.

Although bleeding is generally deemed essential in the treatment of this disease, and in my estimation of the most importance; it is not always carried to sufficient extent. Our attention in the first instance, should be directed to the reduction of the inflamatory diathesis, by frequent and copious venesection; by the warm bath, and by the application of an epispastic to the abdomen. The frequent recourse to active purgatives in the commencement of the disease, are no doubt injurious. Cooling and gently laxative medicines may be used with safety, after blood letting has been sufficiently used. Calomel is the

most efficacious apperient we can employ, when there is great constipation, and after sufficient blood letting.
Untile evacuations have been procured whatever aliment is given to the patient, should be of the most bland nature; such as barley water, Chicken broth &c; and even these should be taken in small quantities: the reasons for which, it is unnecessary to describe, as they must be obvious to every person.
When there is considerable Irritability of the Stomach and much vomiting, Opiates are frequently resorted to, in a very early stage of the disease. To me it appears almost impossible, that Opiates in this stage of the disease could fail proving injurious, and should never be made use of, untile evacuants

have been sufficiently used. The stimulus of the Opium ~~might~~ might increase the action of the vessels, (if given before the obstruction was removed by evacuants) and induce a mortification of the intestines. Oil is recommended as a remedy of much importance and cases have been reported as being relieved by its application, after all other remedies have failed. I have gone through most of the exciting causes of the disease, and have endeavoured, in as clear a light as possible, to point out the general indications of cure. —

Dissertatio Inauguralis,
de Usu Medico
Frigoris,

quam, annuente summo numine,
Viro admodum Reverendo
Jacobo Kemp, D. D. Præfecto,
Cæterisque Gubernatoribus,
Academiæ Terræ Mariæ,
Præsertim, Excellentissimæ Facultati
Medicæ,
pro Gradu
Medicinæ Doctoris
Examini,
subjecit,
Matthæus J. Allen,
Terræ Mariæ.
Anno Domini MDCCCXX.

MDCCCXX

Cosmo Gordon Stevenson M.D.

Hæc Dissertatio dedicatur, non tantùm ut expressio perparva, et prorsùs inadequata animi grati, pro multis et magnis beneficiis ab illo receptis, et pro ejus instructione excellenti, in omni parte scientiæ medicæ, præcipue in Anatomiâ, ad quam erudiendam insignitèr idoneus est; sed ut nota parva meæ æstimationis permagnæ, ejus scientiæ eminentis in omni medicinæ parte, et ejus eruditionis generalis.

Amico
et
Discipulo
Auctore.

Dissertatio Inauguralis de Usu Medico Frigoris.

In sequentibus observationibus, de usu medico frigoris, inspectioni Professorum hujus Universitatis, offerendis, facilè opinetur, me impelli magis ordinationibus cuique candidato, pro honore medico, impositis, quam, ullâ spe celebritatis de facinore.

In delectu hujus, è infinitâ varietate subjectorum quam scientia Medicina suppeditat, in cilor conscientiâ habendi potestatem id agere, meliori modo ferè quam ullum aliud, quod se obtulit meæ investigationi. Simplicitas ejus modi operandi, celeritas effectuum, et facilitas, cum quâ remedium sit omni occasione, administrandum, sunt inter incitamenta quibus fui impulsus.

Varicæ opportunitates mihi oblatæ exhibitionem ejus videndi, et effectus felices de usu ejus exeuntes, itidem in me momenta habuêre.

Praxis in febre, quæ jamdudum prævaluerat, ægrotum stragulis onerandi, et propè eum suffocandi aëre calido et tepidis potionibus, à diu obsistebat remediorum introductioni jucundiorum aut efficaciorum.

Prejudicia hominum necessariè cominus comitata sunt medicos ætatis, et ad tantum doctrina gradum infatuandi urgebatur, ut methodi medendi naturæ simpliciores, agua algida, vel ipse aër frigidus omnino excommunicatæ sunt. Intrepido quidem animo fuisse oportuit, qui primus auctoritatem ausus est tam fastuosam obterere, et methodum medendi inusitatem conari.

Erga hanc methodum meliorem, primi gradus fuerant, haud dubiè admissio recentis

aëris, obiter, in thalamum ægroti, et aquæ frigidæ exhibitio cauta, plus sitim ejus gratificari, quam ullâ expectatione eum meliorescere.

Commodis deductis ab his indulgentiis observatis, timiditas eorum medicorum et amicorum gradatim evanuit, et ventilatione et applicatione liberiore frigidorum potuum utebantur, prout sibi ratio imperium assumpsit. At nuperrimè tamen est quod in febre aquæ frigidæ affusio, vel applicatio externa, ullo modo, generatim in praxin admissa sit. Doctori Currie obligamur, pro destructione obstinatorum præjudiciorum contra usum aquæ frigidæ, qui, per ejus varia experimenta, et latè diffusam praxin, manifestè demonstravit suam actionem efficacem, et communitati eam confidenter illuminatæ commendavit.

Morbos nunc diversos enarrare, in

quibus aqua frigida utiliter applicari potest, procedo; ipse plerosque casus vidi, et reliquos ab eminenti auctoritate accepi.

In Febribus.

Febris existens et forma prævalens morbi, et reductio cujus, quemadmodum symptoma, poscens primum medici respectum naturaliter se offert, præ aliis minoris momenti, consideranda.

Quando systema pulsu pleno aut tenso, cute aridâ, fluxibus ad faciem sanguinis, siti, inquietudine, vel cum, vel sine delirio, premitur, affusio aquæ frigidæ super ægroti caput, se probat remedium esse celerrimum et felicissimum. Hæc operatio, tantis intervallis, repetenda est, ut casus requiratur, eâ directâ, revenientum symptomatum pressurâ.

Ager abomni specie morbi, instantèr per suam primam administrationem relevatur: symptomata verò propensa sunt sese redintegrare, ideòque iteratio fit necessaria.

In multis occasionibus, difficillimum erit, vel ægroti, vel ejus amicorum, consensum obtinere, aquæ frigidæ affusionem, minimè, etiam applicationem, externè, suam in ullâ formâ, permittere; attamèn, ad aquæ frigidæ cum aceto et spiritu vini permistæ, usum persuaderi possunt, quâ tota superficies corporis per spongiam sæpissimè madefacienda est: hæc admistio, increscendo effectus exhalentes, reverà præscriptionem majoris utilitatis efficit, dum fides, in naturâ calefacienti misturæ ab asseclis receptâ, plerumque constantem ejus parat applicationem. Multos homines mirè relevatos brevi tempore vidi, usu in hoc modo aquæ frigidæ, qui, mihi persuasum est, multò

diutiùs passi fuissent, si hoc remedium non adhibitum fuisset. Multis in exemplis febris biliosæ vulgaris, sed præsertim malignæ Epidemicæ recentis exhibitio aquæ frigidæ, externè et internè, libera fuit auxilium validissimum et efficacissimum: ac etsi Hydrargyrus largè administratus fuerat, haud ulla erat necessitas idcirco, suam applicationem limitare. Et equidem, mihi manifestum apparet, generalem aquæ frigidæ adoptionem, vel affusionê vel spongiâ modum fore efficacissimum febres medendi, et proindè catalogum mortalitatis valdè diminuendi.

In Scarlatinâ Anginosâ.

Usus aquæ frigidæ externus in hoc morbo, a Doctore Currie excelsè laudatur.

Guttur ulcerosum hunc morbum comitans,

certè febre augetur si non efficitur, hinc aquæ frigidæ affusio, febrim reducendo, hunc effectum levare tendit, et, si ab initio morbi applicetur, symptoma hoc verisimiliter omninò praveniret.

Ipse vidi effectus excellentes lintei, in aquam frigidam immersi, et circum guttur positi, in levando celeriter hanc affectionem prementem ac periculosam.

In Rubeolâ.

Præceptor meus Cosmo G. Stevenson M. D. primus fuit, quoad scio, qui attentionem medicorum, in Rubeolâ, ad frigidam methodum medendi, adduxit.

Literæ ejus de hâc re publicatæ sunt in "Barton's Medical Journal". Ex tempore epistolæ istius; praxin illic memoratam

aëris frigidi servavit, ac ei, pro re natâ, usum aquæ frigidæ aceto permistæ, quandò febris fit prælta, addidit, et cum effectu felicissimo. Linteum aquâ frigidâ permadidum, et constantèr super occulos retentum, se probavit remedium utilissimum ac amœnissimum pro opthalmiâ, quæ hunc morbum comitatur.

Cæcitas aliquandò hoc symptoma sequitur, quæ in omni casu, usu aquæ frigidæ potest evitari. Usus internus aquæ frigidæ, libèr est eodem tempore permittendus, qui dùm gratificatur ægrotum, febrem coërcere, et tussim titillantem, comitem maximè frequentem, lenire frequèntèr adjuvat.

In Cynanche Tracheali.

In duobus hujus morbi casibus, auxilia

maximè decisa, ab applicatione gutturi aquæ frigidæ consequi cognovi. Causâ hujus morbi, et frigoris efficaciâ in actione inflammatâ considerata, persuasum mihi habeo, quod, glacies contrita in vesicâ posita, et principio morbi, ad guttur applicata, morbum celeriter et efficaciter removeret. Aut dubie remedium huic simile, tam faciliter acquisitum, in hoc morbo formidabile dignum est tentatione.

In Cynanche Parotideâ.

Glandula parotidea ità in axillâ mandibulæ posita est, ità quibusdam partibus systematis maximè momentosis connecta est, quod non attoniti debemus esse invenire hujus inflammationem adeò extensivam, et vehementem. Hic morbus dolorificus nuperrimè per præceptorem meum

externo solummodò usu aquæ frigidæ repugnatus fuit. Eventus fortuitus ei hunc modum agendi suggessit. Puerulus familiæ, in quâ bynanche Parotidea prævalebat, observatus erat caput ejus et guttur frequentissimè per diem lavare, dùm morbus in eo existebat, et ille ab impetu, sine ullo infortunio, et sine ullo medicamento, convalescebat. Liberi, quatuor in numero, successivè morbum receperunt, et applicatione aquæ frigidæ ad guttur, tractati fuerunt. Omnes, citò sine ullâ molestiâ aut restrictione, convaluêre. Inter alia exempla, puella, decimo octavo ætatis suæ anno, cujus morbus, secundum consuetum modum per aliquos dies tractatus fuerat, sine multo beneficio, uti aquâ frigidâ persuasa fuit, et illa rapidè revaluit. Videretur, hinc, febrem fuisse consequentem, primò, glandularum affectionis, et

postea, febrem et inflammationem sese in=
vicem affecisse. Aquæ frigidæ applicatione
et ægroto in aëre aperto frigido se exercere per=
misso, ambo symptomata omninò cohibita fuere.
Res altera vera coram nobis se stitit, videlicet,
quòd morbi translatio, a gutture ad testes maris,
et mammas fœminæ, tam formidata, hunc
modum medendi non consequitur, cum in
ullo exemplo è novem vel decem ægrotis non
accidebat, qui, frigidarum applicationum usu,
medicabantur. Si transferatur æquandò
morbus certè raritas eventûs contra tam
efficacis usum remedii nunquam debet
militare.

In Catarrho.

Quanquam Catarrhus non sæpe morbus

fatalis sit, tamen adeò valdè est premens, in ejus accessu ut peritiam medici poscat, ad ægroti perpessiones mitigandas. Doctor Benjaminus Rush, in catarrho recenti, ægrotum halicem balsam edere, ut sitis sit excitata, hoc et desiderium abundantèr bibendo aquam frigidam gratificari. Hoc remedium inventum est efficacissimum. In quibusdam casibus durissimis catarrhi, cognovi calicem aquæ frigidæ, unâquâque semihorâ captum, donec dimidium congii fuit consumptum, festinè et ominò sublevare; sed querebatur ægrotus de difficultate præscriptionem sequendi.

Cùm catarrhus modo est febris, locali determinatione, comitata, non mirandum est, quod aqua frigida tam utile in eo esset. Benè scio quod usus frigoris in ullâ formâ auctoritate magnâ pro=

-hibetur, sed examen experientiæ, in praxeos varietate, quam tam fortunatus fui, vidisse, suffecit me coarguere, nullum minimè in suâ applicatione periculum, apprehendi.

Gutturis titillatio, et brevis premens tussis quæ pleuritidem comitantur, aquæ frigidæ quantitate parvâ, decem quibusque minutis, captâ, et per aliquas horas continuatâ, insignitèr sublevantur; nec ulli unquam indè infelices orti sunt effectus. Doctor Stevenson primus fuit, qui, hanc praxin illustravit, et me docuit successum, cum quo comitata fuit.

Morbos alter est in quo usus aquæ frigidæ prohibitus fuit, scilicet sudamina; verò eundem medicum vidi, omnem hujus casum sine discrimine, frigido lavacro, et successu haud ambiguo tractare.

Quamdiu in Variolis usus aëris frigidi, et etiam haustus aquæ frigidæ, prohibebantur! Ratio et Experientia tandem præjudicium vicerunt, et Variolæ, per modum curandi frigidum, factæ sunt, comparativè, morbus innocuus.

In Dosi Opii Nimiâ.

Quandò opium in quantitate nimiâ in systema receptum fuit, exitus fatalis expectetur, nisi auxilium tempestivum adeptum sit.

Immodicam excitationem esse primum effectum conditionis hujus, credo universe concedi, et si hæc non removeatur, mors plerumque sequitur. Inter numerosas res in sublevationem ægroti præscriptas, non reminiscor aquam frigidam commendatam vidisse, præter in exemplo,

a Doctore Franklin Scott, de Virginiâ memorato, in ejus dissertatione inaugurali, Philadelphiæ, impressâ anno 1803.

Res ad quam alludo illic sub capite "Experiment" pagina 47 inveniri potest. Doctor Stevenson qui eodem tempore, et loco, cum eo gradum in medicinâ sapessivit, mihi enarrationem sequentem factorum suppeditavit. Doctor Scott in eum invocavit, et ejus auxilium rogavit, in experimento perficiendo, de modo comparitivo medendi, in casu nimiæ quantitatis opii receptæ, cui alacritèr assensus est. Doctoris Stevenson methodus sicut Doctori Scott communicabatur, erat in initio actionem opii affusione aquæ frigidæ reprimere, et eo effecto, systema applicatione sinapeös adjuvare.

Doctor Scott modum opinabatur non succesurum esse, et primo, venæsectionem, et

* Cur loquitur Doctor Scott "We" in hoc loco, quum incepit singulari "I"?

tunc spiritum vini proferebat, ad secundariam intentionem efficiendam. Quæ Doctori Scott causa fuisset, nominis ejus amici in hoc experimento mentionis negligendæ penitus inexplicabilis est. Sed non copiosè de hâc re disserendum progrediar integram sententiam exscribere. "To see the results of different "methods of cure" dicit ille "where large doses "of opium are taken I made the following "comparative experiment. Having procured "two pups, more than two months old, and "of the same litter, one scruple of opium was "given to each of them. One, which I called "A, slavered considerably. In ten minutes "he was purged, and in 30 minutes appeared "very sick; at this time * we began to bleed "him, and at the end of one hour, we succeeded in getting six or eight ounces of blood."

"* This was a table spoonful of equal parts of proof
" spirit and water "

"In seventy five minutes, was very languid
" and dull; respires slowly. I gave half an ounce
" of spirit and water*. In one hour and thirty
" minutes, was laid down, in a profound sleep;
" pulsation of the heart scarcely to be felt: repeated
" the spirit and water."

" In two hours, respired slowly; very stupid:
" the spirit and water repeated."

" In three hours slept soundly, and when
" roused, was dull and stupid; respiration
" was slow and difficult; the pulse weak
" and intermitting: repeated the spirit and water.

" In four hours no alterations, except slight
" subsultus: repeated the Spirit and Water."

" In five hours the symptoms had all in=
" creased. The pulse was imperceptible; he
" lay stretched out, the mouth wide open,
" with singultus and sterterous respiration;

* "The water was fresh drawn from the pump, and very cold"

"the spirit and water was increased in quantity,
"and repeated oftener, but it did not rouse
"him. As he seemed about to die, I used
"stimulating Injections of salt and water, and
"laid on large sinapisms to the belly and
"thighs. It was all to no purpose, for he
"died in five hours and an half from the
"time the dose was taken. Upon dissection,
"the usual morbid appearances were seen"

"Case of **B**. In twenty minutes
"after the dose, he appeared very sick,
"and similarly affected with **A**." "The
"shower bath and plunging bath were
"used alternately, three times an hour,
"from this time to the end of two hours*."

"In one hour, had constant rigors; the
"respiration very quick; moans at inter=
"val. When the cold bath was used,"

"he was roused from the stupor into which
"he seemed very much inclined to fall. Was
"not so dull and stupid as A. In two hours
"I applied sinapisms to the inside of the thighs.
"The tremors continued; did not lie down
"to sleep; the bath was discontinued".

"In three hours the tremors subsided;
"respiration more natural, and the sensibility
"returned; was in every respect better than
"A. The sinapisms excited considerable
"pain; after this they were applied to the
"adomen"

"In four hours the sinapisms were removed.
"The effects of the Opium had in a great
"measure subsided, and sensibility nearly
"as great as in health."

"In five hours and an half when A died,
"B had nearly recovered. This experiment

"was repeated and the results were nearly similar." Successus hoc experimentum comitans, Doctorem Stevenson induxit hanc methodum adoptare, si occasio in ejus praxi offeretur, et in duobus casibus, mihi significavit, methodum supra dictam, et cum felicissima effectu adhesisse: attamèn, in uno ægrotorum, plethorico habitu, eam variavit, ante affusionem aquæ frigidæ, sanguine abstracto.

In Cholerâ Infantum.

Hic morbus quo multi centenî infantum quotannis pereunt, apud initium, attâ febre, et cute calidâ, perpetuè comitatus est.

Balneum frigidum maturè, et manè et vesperè repetitum, ambo symptomata prorsùs removet,

et plerumque per se, absolutam sanationem efficiet. Si febris, attamen esset obstinata, Balneum frequentiùs usurpandum est, aut aqua, per spongiam ad corpus applicata, substituta sit, ut ante observabatur. Convulsiones, quibus infantes obnoxii sunt, maximâ ex parte, cum febre, et cute calidâ, comitatæ sunt; ac corpore, per spongiam, lavato, aquâ permistâ cum aceto, et cruribus in aquâ frigidâ positis, ægrotos, generalitèr, sine molestiâ majore relevabunt. In convulsionibus, è usu excessivo spiritûs ardentis, ortis, immersionem crurum in aquam perfrigidam, maximæ esse utilitatis, cognovi; visa est, equidem subitò spasmos reprimere, et ægroti brevi tempore facti sunt tranquilli; sed sanatio non omninò huic remedio credita fuit, venæsectione copiosè usurpandâ, æque vasorum

actionem minuere, atque morbi redintegra=tionem impedire.

In Hæmorrhagiâ.

Doctorem Darwin credo, primum fuisse, qui Balneum frigidum commendavit, internas hæmorrhagias coërcere. Ille casum Hæmaturiæ memorat, quo, æger costarum tenus immersus fuit, quâ per paucos dies successivè repetitâ, sanationem efficacem probavit.

In Hæmoptysi, ubi pulsus languidus fuit, Doctor Stevenson lintea permadida, cum commodo manifesto, ad pectus applicavit. Usus aquæ frigidæ, ad caput et collum in Epistaxi, aut quandò obstinata est, ad scrotum, applicatæ, benè cognoscitur.

In Hæmorrhagiâ Uterinâ, medicus, profectò

quid agere nesciret, si aqua frigida, acetum, et glacies, sese non offerebant. Introductio glaciei in Uterum et Vaginam fermè remedium specificum æstimatur; medicus et qui, primò, constantiam habuit hoc remedium applicare, contra ignarum prejudicium, abundanter omnem honorem meretur quem suus immutabilis successus ei attribuit. In Hæmorrhoidibus, ubi dolor intensus est, et videtur artem medici irritam reddere, Injectiones aquæ frigidæ, per anum, similes fascinationi operantur, atque calorem excessivum et dolorem excruciantem, qui tam frequenter comitantur instantèr dispellunt. Repetitio aquæ frigidæ ægroti arbitrio, relinqui debet, cùm nunquàm injuriam facere potest. Coxæ et dorsum, etiàm, pro re natâ, aquâ frigidâ laventur.

Non devium erit, hoc loco, validam

efficaciam aquæ frigidæ injectæ in intestina memorare, casibus istis, ubi quod non inepte dicitur Ardens Calor prævalet. Hic frequenter in febre biliosâ invenitur, et valde communis fuit, regnante nuperâ Epidemicâ.

Aqua frigida, sic ad internam superficiem intestinorum, applicata, immediate solamen dedit, et voluptatis sensum non facile definitum, produxit; auxiliata est, maxime febrem universalem cohibere, intestinorum actionem temperavit, ac permultum contulit ægrotum ad salutem restituere.

In Podagrâ.

Favor, ab extremitate ad quoddam momentosum organum, Podagram transferendi, homines generaliter ullâ applicatione frigidâ

ad partem hoc morbo affectam, abstterruit.

Patientia et Lanula præscriptionem usitatam medicorum constituunt, et ægroto afflicto, equidem permagnâ prioris copiâ opus est. Conatus unus, a Doctore Rush factus est, hunc morbum severum usu vesicatoriorum. Ejus ratiocinatio eum induxit opinari quod, inflammatio vesicatorii pervinceret, vel permutaret, actionem morbidam partis affectæ, et ità facilem sanationem reddere, vel periodum ejus paroxysmi contrahere.

Sed remedium efficacissimum et celerrimum, quo nos uti possumus in impetibus Podagræ acriter inflammatis, est aquæ frigidæ applicatio.

Meus Præceptor frequentissimè eam commendavit et testatus est ejus præcellentissimos effectus; in decem vel quindecem minutis dolorem plerumque amovet. Ejus methodus est, partem affectam immergere in aquam, tam frigidam, quam a

fonte obtineri potest, et ejus temperaturam, si opus sit, recenti supplemento, retinere. Solamen est fermè instans pro tempore, sed applicatio postulatur iterari, prout morbi accessus apparent.

Nonnulli anni elapsi fuerunt, ex quo fecit ejus primum tentamen, et in multis casibus quibus aqua frigida usa fuit, nullæ incommodæ consequentiæ contigerunt.

Maxima difficultas est, ægroto suadere experimentum facere tam extensivè diffusa est translationis idea; sed, profectò, si doctrina revulsionis, vel metastasis morbificæ materiæ, sit ullius æstimationis, vesicatoria inter adjutores validissimos ejus efficiendi apparent: attamen quandò hæc hydra suam terrificam imaginem non obtulit, ista remedia ipsa invenimus commendari.

Quomodò Podagræ paroxysmus quandò naturæ commissus, terminat, investigationis curiosæ

materia esset, sed cum meo proposito incongrua est, quod tantùm contemplatur remedium offerre, sine ullâ examinatione illius modi operandi. Sed, tamen, si post quæ dicta fuerunt, ægroti etiamnùm statuti, sint in prisco, et inutili modo persistere, si fiat sint non semèl fidem pro explorata sanatione periclitari, profectò opus est nobis eos linguere, circumvolutos in lanulâ, et excruciatos dolore, ad lentas operationes naturæ, et ad possessionem perperam fundatarum præoccupationum.

In Rheumatismo.

In quibusdam casibus Rheumatismi violentibus, tàm naturæ acutæ quàm chronicæ, applicationem, aquæ frigidæ, ad partes affectas, eximiæ utilitatis cognovi. Febrem et dolorem celeriùs relevat, quàm ullo alio modo quam comperi.

Tanquàm, in acutâ formâ, illius effectus commodi promptiùs percepti sunt, attamen in chronicâ formâ stat medicamento nulli inferior.

In uno casu præsertim chronicæ Lumbaginis, post varia communia remedia pertinaciter per aliquod tempus, et sine multo beneficio usa fuerunt, ea omissa sunt, et aqua frigida, per linea, applicata, quæ breviter perfectam sublevationem attulit. Altera vulgariter usui aquæ frigidæ in hoc morbo objectio est, et ad formidinem metastasis additur, videlicet, metus gravedinis capiendi; sed hic est æquè malè fundatus.

In Hydrophobiâ.

In hoc morbo terribili, qui se opprobium medicinalis artis probavit, applicatio

aquæ frigidæ raro se medico supposuit. Convulsiones
territantes quæ adsunt liquidis visis, suam exhibitio=
nem deterruisse videntur. Attamen aqua frigida in
hoc morbo usa fuit, et stabili solamine. In "Allens
Synopsis Medicinæ" de Hydrophobia "article 449" com=
modi effectus aquæ frigidæ sic distincte memorati
sunt. "The frequent immersion of the person bit in
"salt water is deservedly esteemed to be the best and
"most certain preservative of all to prevent a Hy=
"drophobia" Et iterum "article 454" in citatione
auctoritatis Doctoris Lister observat "a great many
"bit by mad dogs have been committed to my
"care, but I never had the fortune to see one
"labouring under Hydrophobia; we are supplied
"with examples in Gallic Hist: Acad: Scient: of
"some cured even when seized with the dread of Water,
"especially, by bleeding even to fainting, immersions
into salt water untill they were in a manner

"drowned, and by the same poured upon them untill
"they were just killed with it."

Ego intimè hominem ingenuum cognosco, qui hoc remedium immersionis in aquam frigidam in duobus exemplis, et post interstitium plurium annorum, tentavit, in aliquos canes gratiosos qui rabido animali istius speciei morsi fuerunt.

A primo die eventûs, morsum animal in aquam frigidam, manè et vespère immersit, et praxin per duas aut tres hebdomadas continuavit. In casibus ambobus symptomata Hydrophobiæ perfectè proeventa fuerunt. Successus amici paucis annis antè, in sequendo eandem methodum cum cane proprio, qui morsus fuerat, statuit se hunc modum adoptare. Ecce, equidem, tres casus decretorii coram nobis se sistunt, qui possunt valdè factum confirmare, immersionem in aquam frigidam esse Hydrophibiæ præventionem.

Prævideo ut urgeatur, probabilitèr, periculum fuisse exaggeratum, et canes haùd fuisse cum Hydrophobiâ affectos omninò. Sed veritas est canes alteros, eodem tempore morsos, et eodem animali rabido, tempore usitato, canino furore prehensos, ac consequentèr occisos fuisse. Hæ res possunt, igitùr, quæ objecta sunt, supra removere præsertim ut mea auctoritas est indubitabilis. Sed cùm hæsitaremus affusionem frigidam, aut immersionem in aquam frigidam, administrare, in casibus Hydrophobiæ? Habemusne specificum, ullum pro hoc morbo horribili? aut potiùs possidemusne ullum remedium, omninò, in quo possumus minimè confidere?

Mihi persuasum est, nullum esse hominem ingenuum facultatis, qui non confiteatur, nos nullum tale habere. Si tùm aqua frigida etiam spem successus offerat, nostra præjudicia supersedeamus, et ad examen validitatem suam ipso experimento

vocemus. Nec equidem debemus esse tam maximè attoniti, si affusio aquæ frigidæ et antidotus et efficax remedium reperetur, pro omni gradu Hydrophobiæ.

Hydrophobiam nonne febris comitatur? Et nonne est hoc probatum, siti immoderatâ quâ morbus hic comitatus est? Vidimus potentia auxilia ab aquâ frigidâ in febre derivatâ. Hydrophobiam nonne convulsiones comitantur? Aqua frigida probata fuit esse maximi momenti in convulsionibus. Estne Cerebrum in Hydrophobiâ affectum? Quisque medicus hos validissimos adjutores, aquam perfrigidam, et glaciem, in talibus affectionibus bene cognoscit. — In Tetano, morbo, qui frequentiùs artem doctissimorum medicorum fallit, usus aquæ frigidæ nuperrimè excelsè commendatus est, imò ferè dicitur esse remedium specificum. Quando alia medicamenta nullum auxilium obtulerunt,

aqua frigida mirifice sublevavit. Hæc veritas, sustenta ab auctoritate gradûs altissimi, ageret nos hæsitare, priusquàm decernimus contra remedium, tàm multis et nomentosis beneficiis refertum.

Similitudo spasmorum in Hydrophobiâ et in Tetano est permagna, ac effectus manifestè boni aquæ frigidæ in hoc morbo, validè suadent ejus applicationem in casibus Hydrophobiæ.

Ità plùs consideramus, magìs strenùe incitamur causam hujus remedii patrocinari. Si inevitabilis sit ægroti mors, saltèm modi omnes ejus evitandi tententur, ut nobis sit nullus aculeus: et si ille convaleseeret, gratificatio quam experiemur, socio-viro conservato, ac destructione certâ, nobis erit magna remuneratio.

In Veteribus Tumefactis Cruribus.

Priusquàm hoc subjectum relinquo proprios

morbos denotandi, quibus aqua frigida faustè fuit applicata, sequentem casum commemorabo, qui nuperrimè praxi Præceptoris mei occucurrit. Mulier, anno sexagesimo ætatis, se obtulit a dolorificâ tumefactione ejus sinistri cruris et pedis, relevanda. Ambo affatim distensa sunt, integumenta dura, squamosa, et in multis locis rimosa, fuerunt; pauca parva ulcera superficiaria prope talum apparebant; casus per annos multos continuatus fuerat, et remedia quæ usurpanda fuerant, ex multis præscriptionibus, perparvum auxilium attulerant. Ei commendatum fuit, crus ejus per horam manè et vesperè in aquam frigidam immergere, et Balneo sublato, a pede ad genu cum oleo olivarum fricare.

Hoc consilium strictè illa observavit, et tribus hebdomadis, membrum ad naturalem magnitudinem restauratum erat, cutis æqua facta est, rimæ et ulcera sanata sunt, et nè

diutiùs illa questa est, id sibi ullum incommodum efficere. Ut tales casus sunt usitati, æstimo exitum hujus modi medendi esse infinitè pretiosum, quia, certo successu, ad illum refugere possumus, in multis iisdem casibus qui cedere consuetæ tractationi recusaverunt, et insanabiles æstimati fuere. Videtur potentèr partes morbidas disponere actionem sanam assumere, et naturâ roborante, in eo positu persistit illas retinere. Quinetiàm est applicatio grata et munda, res multùm optanda et quæ eam in praxi valdè commendabit.

Sic præcipuis morbis enumeratis, in quibus aquæ frigidæ usus essentialiter commodus inventus est, denique aliquas annotationes faciam desultorias, ut subjectum meum sit meliùs intelligendum.

In laudando aquæ frigidæ tam speciatim in morbis applicationem nequaquam putetur me opem aliorem velle remediorum omninò excludere,

sed mere ejus late diffusum usum adigere, ut produ=
centem beneficium magis insigne, quam generaliter
arbitratum est. Sitis, quæ febres cujuscunque gradus
comitatur, aquâ frigidâ solâ gratificanda est, et ægro=
ti pro eâ desiderium, puto, esse in omni casu in=
dulgendum. Tendit sane durationem paroxysmi
contrahere, et ab suo universo postulato, in illis con=
ditionibus, manifeste sicut remedium Naturæ
collocanda est. Mos communis caput et faciem
lavandi, et guttur mane et vespere, aquâ frigidâ
gargarazandi, indubitanter ortus est, a felicibus con=
sequentiis notatis, quæ a consuetudine secutæ sunt.

Quando extensivas inosculationes nervi commu=
nicantis faciei contemplamur, debemus roborantia
et exhilirantia effecta decernere, producta ab aquâ
frigidâ in hunc nervum applicatâ, affecturum
esse potenter alios ramos hujus sensitivæ com=
munionis. Ac iterum quando numerum et

momentum arteriarum, venarum, et nervorum, considéramus, quæ aqua frigida vel directè vel indirectè afficit, gargarazando, et guttur externè lavando, percipimus confestim universam stimulationem fore necessariam consequentiam. Mos vetus pedes in aquâ frigidâ lavandi, qui primas inter ceremonias erat in advenâ accommodando, est excelsè conducens saluti et voluptati. Nemo potest esse judex idoneus jucundiorum sensuûm ortorum, ex hâc consuetudine, qui suâ luxuriâ non fruitus est.

Systema recreat, acceleratam circulationem refrigerat, cephalalgiam relevat, fessitudinem exulat, et animi tranquilitatem, producit. Nec est hæc pictura exaggerata, ut quivis percipere potest, in calidæ diei æstatis conclusione, quando suum corpus, defatigatione, aut calore exhauritur, et totus homo in lassitudine obrutus est.

Tempus ad utendum frigido Balneo in

statu salutis, est contentionis subjectum nempè seu mane aut vesperè, esset præferendum. Opinor consuetudinem communem caput collum et faciem mane lavandi, satis esse, omissâ capitis totius in aquam frigidam immersione; sed vesperè quando systema calefactum, et fatigatum fuit, ac sorde, et perspiratione, ei adhærentibus, turbatum est, Balneum frigidum esse præponendum; vigorem novum impertit, et generàliter somnum recreantem inducit. Ergo Balneum vesperum præferrem, quànquam nullum argumentum contra ejus exhibitionem matutinam, proponerem.

Usus aëris Balnei est valdè saluti conducens, ac in potestate cujuscunque est exercere. Consistit in corpore ad cursum aëris liberum exponendo, statim post tempus è lecto mane surgendi. Ejus usus in tempore Hyemali, præcipuè, beneficus est, robur et vigorem systemati musculorum

impertiens ægrè credibile, nisi ab iis, qui ei sese assuefaciunt. Pauca minuta satis sunt pro suâ applicatione, et sua beneficia eos benè compensabunt, qui faciunt experimentum.

Ita officio mihi assignato, legibus constitutis hujus Universitatis, peracto, concludo meas gratias maximas, ejus Professoribus offerendo, pro instructione excellenti quam ab illis recepi.

Finis.

"Phœbus! fave! novus ingreditur tua

templa sacerdos." Tibullus.

An Essay

On the External Application of

Tartarized Antimony,

Submitted to the consideration of

the Rt. Rev. James Kemp, D.D. Provost,

The Regents and Medical Faculty

Of the University of Maryland

For the Degree of Doctor of Medicine,

By Charles Lewellyn Gardiner,

of St. Marys, Maryland.

Anno Christi 1826.

To

Colin Mackenzie M.D.

Physician to the

Baltimore Hospital,

This Essay

Is respectfully inscribed

By his pupil

The Author.

Introduction

Of the external use of Tartarized antimony little has been hitherto said by any author with whom I am acquainted; what has been said is in so detatched and indefinite a manner, that it has never, I believe, been introduced into common practice, the few remarks which I have to make upon this subject are the result of much reflection and a few experiments which I have been enabled to make since my residence in the Baltimore Hospital — of the internal use of this very valuable Medicine I have deemed it quite unnecessary to make any mention, since its Modus Operandi and application to diseases in general, appears to be sufficiently established by many well authenticated facts; however, an atempt

by me to do more than has yet been done, might with much justice be considered presumption — in speaking then of its external application it will be found necessary to take a Theoretical view of its Modus Operandi, which I shall first consider, then some facts which have occurred under my own observation since a pupil in the Hospital, as well as that of many other gentlemen, will be stated, and such deductions drawn therefrom as will I presume be objected to by few — this subject has been selected, after much hesitation and anxiety, and I might add an unwillingness to follow servilely the paths which have been hitherto so repeatedly trodden; and likewise a thorough conviction that upon most common-place subjects little or nothing new could be said —

To you then gentlemen (the Professors of this institution)

Introduction

This my first and feeble effort with its various blemishes is submitted — expecting a fair and candid examination, and that it will receive all the indulgence which the production of a young man must be so justly entitled to, I am induced to believe, it being a measure in compliance only with the regulations of this institution and by no means a voluntary one —

Essay

It is with much diffidence and hesitation indeed, that I proceed to an explanation of the probable Modus Operandi of this most important medicine, aware as I must be of of the many and insuperable difficulties which occur to all those who make such an attempt, and the great discordency of opinion to be met with whenever this uncer=tain and momentous branch of our science has been ad=vanced to, even by the pillars of the medical world, Men whose industry, talents and fame have diffused a lustre over the whole civilized globe — yet such an attempt being absolutely necessary to the farther progress of this Essay, I must approach it with that Modesty and deference which its superior importance so imperiously demands — Now in doing this shall I scrutenize all the ancient or even modern hypothesis, but as briefly as is

consistent with my purpose, lay before you that opinion which is more generally admitted as correct. To this end then, it may at once be stated as a Philosophical and general axiom, that all ~~the~~ medicines act upon the living body through the medium of the nervous system; nor do I conceive it necessary that all ~~the~~ medicines thus acting should have their effect conveyed to the brain - this I am induced to believe from the circumstance, that many produce their full effect without our being conscious of it - of this kind are many of the milder classes of medicine. Having laid down what we presume to be an incontrovertible fact, Viz that all medicines act through the nervous system, it now becomes necessary to state the peculiar Modus Operandi of Antimony taken internally as well as when applied externally, for in

this way only can we with any degree of certainty arrive at the most probable manner in which the latter exerts its powerful and in most cases, highly beneficial effects = when Tartarized Antimony is taken into the stomach it acts upon its nerves and produces effects in some degree proportioned to the dose - when exhibited in small portions its action is scarcely perceptible, yet its effect is great in most cases, and when properly adapted to the state of disease always observable and advantageous. When the dose is moderately increased it produces Nausea and its action and effect both, is then striking & obvious - but if the dose be still farther increased this nausea becomes much greater and in a short time full vomiting is produced - through all these different grades of action its antiphlogistic power

is sufficiently evident — in the first instance slightly; more so in the second, and lastly to a very great degree — why this medicine produces these different effects or rather different grades of the same, we do not pretend to say, but that it is so, has been too long known to require at present any proof or further notice — It exerts then its debilitating effect first upon the nerves of the stomach — and secondly, through nervous sympathy, upon the whole system — now it appears sufficiently clear that if the nerves are first acted upon and all its effects are consequent to this, that if this medicine dissolved in a proper menstruum, be applied externally it must there act upon the nerves of the skin and produce similar consequences, save only in a slighter degree, requiring therefore a large quantity (comparatively speaking) to produce a

powerful effect. From this view then we are brought to this simple conclusion, that taken internally or applied externally, the same effect, with the exception already marked, must in all cases be produced — We know that if Tobacco be applied to the region of the stomach, in a short time violent nausea or Emesis will generally be excited — if it be taken into the stomach or injected per anum the same effect is produced; and whatever else follows such as Catharsis, Diaphoresis, &c is in consequence of the great nausia so constantly attendant — so also if a saturated solution of Tartarized Antimony be applied over the same part, vomiting must ensue if the application be continued for a sufficient length of time, which must be greater or less in different cases — then if this be the Modus Operandi, it follows necessarily that we have in our power a very efficacious remedy which has been hitherto very little noticed; one we think particularly applicable to

those cases of Phlegmasia where blisters are not yet safe, but where from some Idiosyncrasy or other peculiarity or from great delicacy of constitution or indeed many other circumstances conspire to render blood letting to a proper extent utterly inadmissible — But another effect of Antimony used in this way remains yet to be explained viz. the peculiar irritation which it excites upon the skin, and the consequent eruption — when in any local inflamation a blister is applied to a neighbouring or even distant part, under proper circumstances, it produces a great and good effect, which has been variously explained by different authors — some alledging that it acts by its stimulating effect upon the general system, and the inflamed part being more susceptable of morbid impressions, is therefore more particularly acted

upon and to a much greater degree, than any other part, ex=
=cited; which excitement is an action, perhaps more power=
=ful than that which first occupied the part, and in
this way produces all its beneficial effects when thus
applied &c. Another equally confident of the correctness
of his Theory with much Zeal maintains that it acts
by exciting what may properly enough be called counter
irritation = according to this Theory no two powerful morbid
actions can exist in the human system at the same
time — one existing there, in a part, if a still stronger
one be excited in another, the first must of necessity
yield to it superior or be very much moderated. in this
way then do others account for the beneficial effects
of blisters when applied to a part distant from that
originally inflamed. I shall not attempt to analyse
either of these Theories, but content myself with the

use of both, and from them form that, which we must think most consistent with the present state of our knowledge — we consider neither the one or the other of these opinions solely, correct, but would rather say that when combined, they form that, which we think would account much more nearly for all the various Phenomina resulting from the application of blisters generaly, than either of them or indeed any other which has yet come before the public — that any two powerful morbid actions can at the same time exist in the human body, I very much question, seeing in so many cases one yielding to another — a case strikingly illustrative of this fact is related by Mr John Hunter (Introduction to the 1st Vol of Hunter on the blood) on the 16th of May 1775 (says Mr. Hunter) I innoculated a gentlemans child. on 19th he appeared to have recd. the infection, a small inflamation or redness appearing

round each puncture and a small humour. on the 20th & 21st the child was feverish; but declared that it was not the varioles fever, — as the inflamation had not at all advanced since the 19th on 22nd a considerable eruption appeared which was evidently the measles, and the sores on the arms appeared to go back, becoming less inflamed. on the 23rd he was full of measles; but the punctures on the arms were in the same state as on the preceeding day. on the 25th the measles began to disappear. On 26th & 27th the punctures began again to look a little red. On 29th the inflamation increased and there was a little matter formed. On 30th he was seized with fever. the small pox appeared at the regular time went through its usual course, and terminated favourable" this case we think decidedly proves the fact, that no two powerful Morbid actions can exert their influence upon the system at the same time — but admitting, what some will

probably claim, that the former action is only suspended and will again act when that of the latter shall have ceased, this cannot militate against the Theory here maintained, for certainly if we can by an artificial irritation suspend hepatitis for example, we would take very great care to cure if possible the disease before we suffered the irritation to subside. if the above may be considered as a fact, there can be little doubt of the partial, although as above stated, not entire correctness, of the latter hypothesis - if we add then to this counter irritation, the well known stimulating effect which blisters always produce, we may with little difficulty explain all the Phenomena which attend the operation of Epispastick. If this then be the Modus Operandi of blisters it will be easy to explain upon that principal or in what manner Antimony applied externally in the form of a saturated solution

produces its effect upon such diseases as it could with any prospect of success be at all applicable; their Analogy shall therefore be kept in view through the whole explanation —

We must from the foregoing view consider the action of Tart. Antimony as an external application, in the following manner viz upon the nerves of the part to which it is applied, producing an effect nearly, if not altogether similar to that resulting from its action upon the nerves of the stomach when taken internally, except in a slighter degree as above stated, which is universally allowed to be that of an Antiphlogistic — if this were its only action it application must be admitted to carry with it all the above stated advantages — but when to this is added its irritating effect which we presume to be equally beneficial with that of Epispastics already noticed, its advantageous influence must be doubly extensive — from these views then

for some time past much reflected upon and enquired into I was induced to try some few experiments which if properly managed would most unequivocally prove the correctness or absurdity of my favourite opinion. the first case which occurred was that of Peripneumonia Notha, in an old man who had for some time past been a habitual drunkard — during the first twenty four hours after the attack, I did not see him, in consequence of my constant engagements at the Medical College, he had however been seen and treated in the usual manner by Dr Dorsey a resident of the House. he was still very ill, harassed with much cough, and a troublesome expectoration — pulse about eighty strokes in a minute full and soft, skin hot and generally dry — tongue white and foul — much pain in the side and tightness across the chest — frequent rigours, followed by some increase of Febrile symptoms — great exaustion

and general debility — with a most excruciating pain in the head, which had lasted for some time and totally prevented repose — this patient had been bled in the first instance, but by abstracting a few ounces only, the pulse fell and syncope was nearly produced — to have again tried it would certainly with much justice have been considered rashness in the extreme — he was when I saw him under the use of a strong infusion of seneka and probably doing well, but for the headach which still continued with unabated severity — I expressed a wish at this time to try the effect of a saturated solution of Tartarized antimony, applied warm to the head and breast which was consented to and immediately prepared — a piece of flannel was wrung out of the warm solution and applied to the anterior part of the head and over the breast — in about fifteen minutes the pain of the head entirely ceased and he fell into a profound sleep which very much relieved him — the repeated application of the warmly wrung out

flannel was continued to the breast, the remaining part of the day and succeeding night, at which time a plentiful eruption was produced wherever the antimony had been applied; the cough became less troublesome - the stricture across the breast and pain in the side much appeased - the skin became open and the fever in a short time subsided; in two or three days he was enabled to walk in the yard. Now that the antimony here produced the cessation of pain in the head, we think cannot be disputed since nothing else of any kind was used but with more apparant reason it may be denied that the application of Antimony to the chest caused the great subsidence of the symptoms which so very quickly ensued - since the Seneka is very generally thought a very valuable Medicine in this disease - nevertheless I must consider the antimony in this case as exerting

very considerable influence from the general moderation of the symptoms which so speedily followed its application; yet it is not my wish to detract from the Seneka any of its well known medical virtues, or tarnish in the slightest degree the many encomium to which it is so justly entitled – on the contrary we think the cure so speedily effected in this case, should be attributed to the combined agency of these two valuable medicines – it may here be observed that during these rigours which occasionly came on, a little brandy toddy was given him – The encouragement afforded by the issue of this interesting case induced me to try it in many others and with similar success; among them was a case of Rheumatism which so very clearly demonstrates the efficacy of our Medicine that I must beg leave to insert it. It occurred about the middle of January 1820 in a

sailor who had a few weeks previous laboured under a severe attack of Pneumonia and had been very much reduced by depletion, being at this time much debilitated. he was however convalescing, when from some ~~time~~ sudden change in the weather or slight exposure (from which that class of men can never be restrained) he was attacked with a most acute Rheumatism of his right arm and leg from his present state of great debility, the result of previous evacuation, farther depletion was thought unwarrantable, yet his pain was very great and some plan of treatment must be resolved upon. It was in this state of things then that our medicine was again thought of, proposed and acceded to; it was prepared as in the former case and applied freely by very gentle friction with a piece of flannel, which was then wetted with the warm solution and wrapped round both the arm and leg; this was repeated every half hour

and in ten or twelve hours a very thick eruption appeared, the pain much diminished and a refreshing sleep followed to which he had been a stranger for the two previous nights. The patient from this time was very little troubled with the pain, which entirely subsided in a few days — he again began to convalesce and in a few weeks left the house perfectly well — a Cathartic upon the first day was the only thing else administered in this case. Here the effect produced cannot possibly be ascribed to any other cause than the operation of the Antimoniated solution. A case of Enteritis soon after this occurred which gave us another opportunity of witnessing its efficacy — this case presented itself in the usual way — attended by much pain and tension of the abdomen — a most obstinate costiveness of the bowels — pulse tense and

small, much pain in the head &c Venesection was used to its usual extent in such cases, Cathartics and injections were employed but with no advantage blisters could not be judiciously applied from the then highly inflamatory state of the system – yet such was the prostration at that time, that recourse could no longer be had to the lancet – Opiates were then used which gave some relief, for a short time but the pain returned again with redoubled force as if it had acquired new vigour from its short repose – and that much too soon for the repetition of the opiate – the bowels during this time remained most obstinately costive, injections or indeed any thing else exerting not the slightest effect upon them; her nothing less than the speedy death of the patient could be expected – it was then in this delimma that our

much valued remedy was once more thought of – it was applied as before, warm over the abdomen and flannel wetted with it while warm laid over the same part – the warm bath having been previously tried in vain, we were forced to trust to this and the occasional use of opiates, but certainly with little probability of success; the irritation which the antimony had excited in the then highly sensible state of the part, was such, that the more free use of opium became necessary – in a few hours however a very copious eruption came out, which at first produced a pricking sensation and in a very short time became sore to the touch; the antimony was now laid aside and an injection given which to our gratification procured a plentiful discharge – a cathartick was afterwards administered which likewise operated well – the opium in small

doses was still occasionally given, which kept the patient tolerably quiet — under this management our patient convalesced very rapidly and care being taken that proper diet was furnished him, which however required an occasional change, and every circumstance likely to endanger a relapse being strictly avoided, he was soon well. The practical deductions, which we think may reasonably be drawn from this case, are that from the high state of inflamation in the intestines, all the secretions from their surfaces were impeded or actually stopped or that from this same state of inflamation any action in them was impossible, and that carthaticks by the irritation which they excited, increased rather than diminished this highly dangerous state; that bloodletting was the most valuable remedy used, and most probably would have rendered all the

others unnecessary could it have been carried to its proper extent – the warm bath would no doubt have been of much service in the management of this case, but from the great pain occasioned in removing the patient to and from the bed and the great debility present, rendered its (otherwise proper) continuance utterly impracticable. The opium was also useful but from its tendency to stimulate could not be solely trusted to. The Enemas were useful after the application of the Antimony, but not previous to it, producing no evident change. to the antimony, as may be supposed, I have much to ascribe; in the first place it acted as a Diaphoretic and Antiphlogistic – and secondly by producing counter irritation, it withdrew the excitability (if I may so express myself) from the intestines, thereby removing that great irritability, which must have

operated so powerfully, in keeping of the inflamation and consequent symptoms. this last conclusion I am induced to draw from the fact of the injections operating so copiously after the application of the Antimony, when it had been previously and repeatedly tried ineffectually; from these cases then which have been faithfully copied from the memoranda of interesting cases occurring in the house, I must believe that this medicine used in the manner above mentioned, if tried repeatedly and varied according to the judgment of the practitioner in ~~the~~ individual cases, would prove a most valuable auxiliary to our general Antiphlogistic means, which at present we feel assured from repeated observation, oftentimes to be ineffectual. it is remarked by Dr Rush

and unquestionably with much truth, that there is a bleeding + blistering point, and we think might with equal correctness have added a particular point for the application of every individual class in the Materia Medica — it is no doubt the want of this knowledge which renders our practice in most cases so uncertain and variable — Dr Rush surely meant by this remark that there was a certain period of every disease to which certain medicines were particularly suited — and if our knowledge of diseases should ever arrive so nearly to its acme as to render these particular points generally familiar they will mark an improvement in our practice unparalelled in medical history. but this is surely to be despaired of; great industry and I fear something more than human skill is required to effect it — we think this remark of Rush's highly valuable to all

young practitioners and very pointedly applicable to our present purpose— It is well known to every experienced Medical gentleman, that there are in many diseases certa=in states at which it is very difficult to decide what plan of treatment should be observed— if a consultation be called one will be for gentle depletion and an other for mild stimuli— and generally in such a state of things little or nothing is done for the patient— he is I might almost say left without any thing, or if any a mere placebo, till the state of the system undergoes such a change, as to war=rant decidedly either one or the other mode of treatment— Such results we have more than once witnessed from the consultations of medical gentlemen of much experience and reputed skill— If to form an opinion upon this subj=ect, would be in any manner excusable in a Junior, I sho=uld attribute all this uncertainty and appearant difference of opinion, to the want of some medicine which in this

medium grade of action would be generally applicable and advantageous. As such then must be considered the medicine the subject of the present paper. It is not expected that the external application of antimony in the manner above mentioned can ever supercede the use of venasection or blisters, but stand as a medium betwiat them, exerting nevertheless a powerfull and benificial effect in all cases to which it is properly adapted — nor can it be supposed that it will be exclusively relied on in any single case, but considered as only an useful adjuvant to other and perhaps more powerful remedies — we may easily immagine a case in which bloodletting to a proper extent could not be used from delicacy of constitution or other cause, and yet blisters thought too stimulating — in any such case (particularly if it be of the Phlegmasia), would not the use of antimony in the manner above advised be a valuable assistant to such means as are usually prescribed?

Conclusion

On concluding this essay, I should do injustice to my own feelings, were I to omit thus publickly to acknowledge, the many obligations I feel myself under, to the professors of the different branches of medicine in this university. Accept gentlemen, my warmest wishes for your individual prosperity. May you meet with the reward to which your merit so justly entitles you, may your lives be as happy as they have been useful; and may your endeavours to improve the science of medicine, be crowned with as much honour to yourselves, as they have been beneficial to mankind ——

Inaugural Dissertation
On
Hereditary Diatheses.

Submitted to the examination of the Medical professors of the University of Maryland.

For the

Degree of Doctor of Medicine.

"Delicta majorum immeritus lues" Horace.

By

William Lewis Lambeth

of Virginia.

Member of the Medical Society of Philadelphia, of Baltimore &c.

March 1820.

Baltimore.

Dedication.

Samuel Kennedy Jennings, A.M. M.D.
Honorary Member of various Societies &c.
My Dear Sir,

The dedication of this essay is pre=
=eminently due to you; — Not for its merits,
nor for the respect I owe and maintain
towards your person. (for that it cannot express)
But because your hand pointed out the
path, and aided me thus far through the
labyrinth of Science; — because you so cheer=
=fully accompanied me on my way to the
temple of the Healing Art. Your eye was
my guide. Your admonition my constant
instructor. By the suavity of your dispo=
=sition, and the affability of your manners,
my toil was made easy, and my journey inter=

-esting and pleasant.

The fruits of my first effort, as a just tribute, are presented to you, with the assur-ance, that, with all the zeal which your example has inspired, I shall continue to as-pire after additional attainments in know-ledge. Accept this pledge of that affec-tion which must remain unalterably fixed, since it has reference to your intrinsic worth.

May the disciples of truth, the lovers of virtue, and the Students of Medicine, con-tinue to hail you as their patron and pre-ceptor. May your desires to do good, and your labours to lessen the sufferings of man, be crowned with the blessings of Heaven, is the fervent prayer of a pupil, who

Dedication.

by all the ties of gratitude and esteem

is very faithfully yrs:
William L. Lambeth

Introduction.

Introduction to an Inaugural Dissertation on Hereditary Diatheses.

By the imperious mandates of the laws of the University, without the wisdom of experience, or the maturity of years, I am compelled for once to appear in the character of an Author.

As might be expected therefore, I come forward not to impart information to acknowledged Masters, but to obtain their permission to become a companion of the followers of Æsculapius, and an inmate with the disciples of Hypocrates.

It is true I have been pleased and instructed, but,

my fund of solid knowledge is still too scant to warrant expectations of originality from my youthful pen. I am glad however to know, that it is my privilege in the selection of my theme, to range over the wide extended plain of the Healing Art, and speculate to suit my purpose. I am also happy in the reflection, that truth, from whatever source it comes, whether it be the patient gathering of sage maturity, the accidental production of bold adventure, or the legitimate offspring of humble exertion, will be alike appreciated, acknowledged, and furthered for the benefit of the human family.

Here I must be permitted to observe, that, I write not for distinction, in tinsel'd rhetoric, in a symmetrical arrangment of words, nor do I write

in scholastic Latin for a Medical Medal. Let these be the emulations of the preparatory schools. There let superiority for Latin composition be adjudged. Their's be the distinctions for refinement of language and beauty of stile —. But let the Medical Student command admiration for industrious research, for careful investigation, and for a judicious selection and application of his explanatory facts.

Truth in her own garb, is my confess'd object. The subject I have chosen for this inaugural paper is eminently important. It not only concerns the health and happiness of individuals & of families, but it involves the best interests of the nation. It has respect to the welfare, and constitutional validity of future generations.

Introduction.

It proposes to explain the nature of an evil, which is now committing ravages upon the human race; — an evil in its progress, slow but insidious; — in its termination, rapid and fatal. Hereditary Disease, is the bane of helpless posterity; — the parental sword unconsciously sheathed in the bowels of unoffending innocence; — A secret venom, which, lurks in the constitution of the harmless babe, growing with its growth, and before the fond hopes of the family arrive at maturity; — in the spring of manhood, the wiley monster breaks-forth, and vulture like, preys upon its vitals, and ere long sinks the unfortunate victim in an untimely grave.

Of Hereditary Diatheses.

The Pathology and Prophylaxis of Hereditary morbid diatheses, are confessedly the subjects of this Essay.

That the theme may be more distinct in its reasoning and intentions, and more clearly comprehended, we propose to commence with the embryo of our existence, and consider the constitutional powers by which the infant is germinated, completed and evolved.

The whole earth and every thing thereon, (man especially) originally were made very good, by the omnipotent hand of the Great Creator. The organization of our first parents, as well as of many succeeding generations was such, as to produce and propogate the species exempt from taint or malconformation. So long as the human species observed the

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instinctive laws of their nature, so long as they kept their appetencies within the limits, in which they might retain them in their most natural condition; so long as they obeyed the lawful demands only, of their Constitutional desires, just so long did they remain perfect in the symetry of their parts, and enjoy the continuance of uninterrupted health and vigour. No sooner had they begun to transcend the natural indications of their wants; No sooner had they by the most imperceptible shades begun to aberrate from the straight paths of their pristine purity, than in the same degree they began to descend below the standard of consumate health; to deteriorate their organization, degenerate their constitutions, and disseminate the evils of Hereditary predisposition to disease.

Thus each succeeding race, with their teeth set on

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edge by the sour grapes eaten by their fathers, at every descending step more enfeebled in health, and in moral power, and more readily yeilding to corrupt propensities and temptations to wantonness, have continued to engender the invisible germs of hereditary maladies. Each generation in obedience to the laws of association or habit, having become more strongly impressed, and more completely subjugated to the baneful influence of the dire dissemination; For "~~Ill~~ habits gather by unseen degrees,

As brooks make rivers, rivers swell to seas."

At length, parents could not fail of entailing upon their offspring the fell destroyer, the subtle consumer, whose presence is denoted by their diathesis, and whose triumph is marked by their premature death.

It is presumed thereupon that if the organization

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concerned in generation could have retained its original integrity, the constitution of man might have forever escaped Hereditary disease.

As every nation under heaven is more or less involved in the same fatal depravity, no example in confirmation of this hypothesis can be adduced. A few well known instances however exist, which may serve at least in some degree to afford additional elucidation of our intended explanations.

The Indians of North America by reason of their occupations and manners, are possessed of constitutions, which, as yet withstand most Hereditary diseases. They are happily strangers to consumption. So also,

The first settlers of these United States who lived before the introduction of the refinements of civilized life.

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were generally unacquainted with those woeful transmissions.
Man seems to have erred through the false direction
of mistaken reason. Unlike the inferior animals,
for in them honest instinct, is

"Sure never to o'ershoot, but just to hit,
While still too wide or short is human wit.
This too serves always; Reason never long;
One must go right, the other may go wrong."

To copy instinct then, is reasons part.

"Thus then to man the voice of Nature spake,
Go, from the creatures thy instructions take." Pope.

Take Nature's path, and mad opinions leave.

We do not conceive Hereditary disposition to dis-
-ease, to depend upon any specific fluid, or matter,
but upon defects in the parental organic powers; —

upon an imperfection of the seminal fluids;- That is, upon some deficiency in those constituent principles, which, are necessary to the perfection of the fluids requi=
=site to generation. This defect of course must involve the primitive organization of the infant; its nourishment and condition in Utero, and will mod=
=ify its state after birth.

The ovum, may have a diathesis, tho' diseased, yet so nearly approximating to a healthful state, as to escape observation; the infant however, may have it distinctly marked in its appearance; the young boy or girl, may have it still more strongly delineated in its features, and the defec=
=tive offspring may even grow up to puberty before the latent enemy begins to commence its ravages upon the system.

Of Hereditary Diatheses.

As the ratio of perfection depends upon the concuring actions and secretions concerned in the production and growth of the child, so in the same ratio will be the strength, vigour and stamina of its constitution.

Doctor Darwin's theory of the imagination in begetting pretty, as well as stout children, is not confirmed by facts and observations, as made in this Country. And we are not informed of any valid argument which opposes our conclusion, that the production of a child, in the integrity of health, depends upon the capability of the organic powers of the parents. If thereupon the organs engaged in generation are well adapted, and if the various crises necessary to a good formation, happily concur, thereby evolving,

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combining and supplying healthy secretions to the growing embryo throughout the time of its gestation, we shall indubitably have an offspring perfect in its parts, sound in its various organs, and constitutionally exempt from an inclination to disease. — So much in reference to the origin of Hereditary diathesis.

I. Let us now pursue the enquiry as it respects some of the features under which this dread destroyer, follows the human race.

A slender frame, with narrow chest and shoulders, long neck, fair and ruddy skin, thin, high and delicate features &c evince the Strumous Diathesis. a state of the body in which there lies concealed an insidious foe, the most inexorable.

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Under a covert still more dark, are hidden the rudiments which prepare subjects for Epilepsy, Insanity, Arthritis, Asthma &c. All of which owe their origin generally, to the conformation and temperament given primarily by their parents. In fine we believe that a proclivity or diathesis to almost any general chronic disease may be inherited.

That it may also be accidentally or imprudently contracted we do not deny. But this is not the subject of our enquiry.

All the predispositions which seem to depend upon peculiarity of temperaments, are inherited, as surely as the temperaments themselves. Thus Melancholia succeeds to a Melancholic temperament. And from the few ideas we have

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of Intellectual derangement, we are induced to believe Mania as one of the hereditable diseases. And, "This of Maladies, which men infest,

Claims most compassion, and receives the least;
Tis not as heads, that never ake suppose,
Forgery of fancy, and a dream of woes."

It may be dormant through successive generations. And through favorable combinations of circum-stances, it may sleep in its undisturbed habitation unawakened for ages. Indeed we might add that by an appropriate education so conducted as to establish ~~such~~ associations, by which the mind may be so trained, as to counteract the temperament;— and we feel confident, that by the reiteration of proper exertions, families known to be contaminated, might ultimately be able to eradicate the predisposition.

But as long as the disposing temperament continues, altho' unseen, unknown, yet hid in the fibre of intermediate families, whenever an exciting shaft pierces the irritable adversary, he is roused and comes forth foaming with rage, and maintains his fury, in many instances, till death shall have kindly removed the wretched victim, and consigned him to the tomb.

Imbecility and Idiocy, properly belong to the same class, and possibly might be counteracted by similar means.

The hereditary predisposition may be fixed upon one particular organ, making it liable to an easy disarray or morbid attack. And unless this predisposition derived from consanguinity be remedied by timely and judicious care, the imperfect organ, will upon the

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first competent exciting cause, throw and bring forth disease peculiar to itself.

1. Thus the Liver, from its particular structure and condition in some families, render them very subject to bilous affections. Others are liable to attacks upon the Intestinal canal. Others again are distinguished by diseases of the Trachea, (Cynanche Trachealis). Every child of some families has an attack of this disease. Out of Ninety cases of Croup, Doct. N. Potter says he could confidently ascribe Sixty to hereditary predisposition. Many of our ideas upon this subject, are due to Doctor Potter, (Prof. of theory and practice of Medicine in the University of Maryland.)

It must be evident from the theory now offered that a radical cure of any one of those diatheses, can be effected only by such measures as may produce an entire change

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and renovation in the organic condition of the parts concerned; so that a new diathesis accrueing from a change of structure, shall be instituted. Considerations in respect to the accomplishment of this end, will now properly claim our attention.

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Of Hereditary Diatheses.

We have a strong apprehension that the eye of the faculty has been too constantly fixed upon the theory and cure of disease, without paying the necessary attention to the Art of preventing it, which would indeed, restore health to mankind. How few have written on the prevention of disease? And yet how much more essentially valuable to society, how much more profitable & felicitous it would be to avert a calamity, than to patch up stricken and wounded nature, after she has withstood the shock, or has been overwhelmed by the disaster! By similar management in the affairs of life, we invite the thief. He comes, and finding the doors open, and goods exposed, he boldly enters, plunders and fires the building — When all is conflagration, the multitude run, the engineers are busily engaged, and all consent in the necessity of extinguishing

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the flames. But they are too late! Their exer=
=tions and labour are in vain! — Had they been wise &
careful — Had they made fast the doors — had they in
due time exercised foresight and ~~have~~ fortified the build=
=ing, the enemy might have been excluded and the
destruction averted. But,

"Man to procrastination prone,
Neglects prevention of disease;
The malady steals slyly on,
And life destroys by slow degrees."

The desire of health and vigorous longevity, is one of the
first principles of our nature, and has been implanted in
us for the wisest purposes. Whilst it excites us to exertion
and labour in procuring the means of supporting our
mortal existance, it reconciles us to bear with patience
the many distresses and pains which are the lot of man.

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But though this feeling is possessed by almost every in=
=dividual, it may be wondered, why the preservation
of health, a subject of such importance, of such inesti=
=mable worth, should ever be overlooked!

"We have left undone those things, which we ought to"
"have done, and have done those things which we ought"
"not to have done". Because we have neglected,
and left unguarded our coast and ports, the ruthless
enemy invades us.

Me thinks I see the Phthisical host from far, with
pestilence on their wings! They come to destroy the
licentious epicure, the idle son of wealth, and
~~upon~~ the unfortunate, tho' once promising youth, who
has devoted himself to lasciviousness.

Who can hear the cries of so much suffering and
withhold relief! But when we add the sad lamentations

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of the innocent, when the sinking sons and daughters of imprudent parents, stretch forth their hands and cry to be sustained — All nature groans in their behalf and claims our help! Even stubborn indifference yields; — Compassion inspires a hope — Industry prompts us on, and kind benevolence maintains an effort for their good.

As an explanatory example of the system which we propose to offer let our observations be turned to that fatal malady Phthisis Pulmonalis.

One third of these deaths in England, are produced by Consumption. Nearly one fifth of the dead in America within a few years have fallen by this dread disease. And it is a serious fact, that the number is rapidly increasing. This itself is suff.t to enlist the faculty in an unanimous attempt to search for an effectual prophylaxis.

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It may however, need an apology that one who has acquired so small a share of the Healing Art, should dare to propose a practice in the midst of sage experience and maturer years. It is admitted that intrusive youth should bow to venerable age. But youth has zeal and ardor "which may suggest an idea or fact, that may awaken other ideas and discover facts, which now lie useless in the memories or common place books of others". Even a youth may direct attention to some useful expedient. Efforts cannot be too often made to institute and establish a practice which may successfully oppose this formidable disease, or tend to develope the rudiments, which may ultimately lead to the prevention of all hereditary disease. An intention so important will forever justify every physician, young and old to sound the Tocsin and

make his admonitions echo and reecho through the land, until he shall have warned the present and saved the future generations from the impending dangers.

I. A delicately slender make, fair and ruddy complexion; long neck, narrow chest and prominent shoulders; hollow temples, thick lips weak voice, a peculiarly soft, thin, and flacid skin with large veins; great sensibility, and a sprightly intellect, constitute the principle features which mark a Strumous diathesis. Such is the elegance and apparent excellence of the habitation in which this insidious foe to human life, takes up his abode.

I. Some writers choose to insist upon certain varieties of this disease, and consider them as so many distinct species, arising from different causes, as Phthisis Plumida, Phthisis Scrofulosa, Phthisis Hæmoptoica,

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Phthisis Exanthemica, Phthisis Syphilitica &c. These varieties we believe to be arbitrary and wholly improper.

True Carbunculous Phthisis Pulmonalis depends upon a Scrofulous diathesis only, and that, either acquired, or inherited from ancestors; — Being seated in the lungs more particularly. A system so predisposed, is liable to be, by various circumstances, excited to take on the disease. When once excited, it pursues its course, (according to circumstances) through the various stages of the disease, or the different conditions of the organs affected. And, therefore, the many species which have been described are merely so many different degrees of the same disease, indicating its various appearances in different subjects; — varieties, depending upon other affections of the pulmonary organs, perhaps essentially different from Carbunculous Ph

Of Hereditary Diatheses.

We do not propose to discuss any theory concerning its particular nature, nor to examine the validity of any one system of treatment; but, in as few words as may be convenient, give our own views of the subject.

Many remote exciting causes, may tend to bring forward this morbid action; Certain occupations in life. such for instance, as confine persons to one posture, as that of, Coopers, Cutlers, Taylors and Shoemakers. In all these the stomach, Liver, heart, Lungs &c are compressed and impeded in their natural functions by incessant pressure. So also persons of sedentary habits and who neglect the necessary exercise, or if they exert their Muscles at all, they do so in a sudden and irregular manner, which (like Ergot upon the excited Uterus) serves only to concentrate the action, crowd the Lungs and hasten the accession of the disease.

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The Pulmonary organs thus injured at every attempt at exercise, respiration becomes less complete, the condition of the fluids depending upon respiration, becomes in the same ratio more and more imperfect. An enervating sluggishness must follow, and the circulation continually becoming less energetic, and more circumscribed, is always tending to recede from the surface, and retire to the warm internal vessels, where there is least resistance to its passage, and where it is fatally retained by a morbid adjustment of the parts concerned.

The system from habit feels less demand for full and complete respiration:— The patient lingers — till at length the blood is confined chiefly to the vessels of the lungs and other viscera and to the larger bloodvessels of the body.

Now the muscles, extremities, skin and subjacent parts

are but half supplied with excitement or its concomitant excitability, from want of blood in the capilliary vessels. The skin is pale and flaccid, and glides over the subjoining parts like a pliant sheath. The blood ~~passes with~~ passes tardily even through the lungs; the whole body is enervated; the patient complains of pain, feels inactive and weak, and is soon debilitated by exercise. He is now ripe for an explosion, and upon the application of a competent exciting cause; such as violent exertion, or exposure to cold, a cough commences, often accompanied with tickling in the throat and Hæmoptisis. The smoking combustibles are now ignited. Debility, pain, cough with expectoration ensue; and these ~~symptoms~~ symptoms being aggravated, the citadel is at length set on fire, and the poor helpless sufferer, may now be said to have the Consumption

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The consideration of the prophylaxis or prevention of Phthisis Pulmonalis will lead us to suggest other exciting causes, and also to offer some farther explanation of its pathology. Therefore we hasten to another part of our subject.

1. Were we in possession of the philosophers stone, or some of Paracelsus' Immortal Elixirs, or had we but half the number of Nostrums, Specifics, and paracias faithful to their Authors promises, we should not, indeed, want any code of treatment for rooting-out, preventing and curing this fatal Malady.

But unfortunately such trash, turns out to be merely as so much more fuel for the support and aggravation of the Combustion — Mere Stuff, sickening and odious to candour and sound intelligence.

May all such vaunted craft redound to the ~~shame~~

infamy of its Authors! ~~tradition shall have no more of it~~ Every one who wishes the science of Medicine to maintain its dignity, and be indeed a blessing to the human family, will stamp all such vain presumption, and egoted vagaries as pernicious & dangerous — And concur in the testimony of the fraternity to institute and establish a systematic practice, built upon experience and reason.

D. From what has been said, our method of eradicating Hereditary diatheses must be anticipated.

We have said that it depends upon the organization of the patient; an organization acquired by ~~the~~ pernicious manners and customs, habits in life, employments, concurring casualties & licentiousness, luxury, effeminacy, manner of clothing &c &c In this way, it may be brought into the composition of the bodies; cultivated in the systems

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of the Ancestors, and afterwards, by them, transmitted to their offspring in full form. ~~The~~

A satisfactory consideration of these, individually might well constitute several large volumes. To do them justice in all their particulars far exceeds our strength, much more the limits of this paper. A few general rules must suffice, while we rest in the hope, that some ~~future~~ abler pen, will do this subject the justice it so amply deserves.

Of Exercise

VI. The structure of man declares he was made to labour and to "earn his bread by the sweat of his brow". The subsistence of all flesh is from the earth. We believe it never was intended by the Great Author of all things, that one half of the community should live by craft and cunning, on the labour of the other.

But that all, every one, should work and "earn" that, which he obtains. Disobedience to this immutable law of Nature, brings the many Consumptions, and other incurable diseases, which now so universally and so justly afflict the inactive and wanton part of the people. The herd, the flock, the meadow, and the fields should be the delight of the people. Then we should see health and strength, return in blooming radiance to all our race. But so great is the ambition, and the avarice of men! so stubborn are they, and blind to their real interests, so naturally averse to principles of sobriety and ~~industry~~ virtue, so prone to intemperance and excess, that they still leap the bounds intended to secure their own comforts, and trample upon those laws, obedience to which, is essential to their happiness.

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If their be a specific for any disease, it surely is fatigue, or exercise approaching to fatigue, for Consumption; and a laborious life, well conducted, for the removal, and entire eradication of a Hereditary Diathesis. Doctor Sydenham remarked, that riding on horseback was a specific for Phthisis. Doctor Franklin's case of a "Post Man", as also many others, tend to verify this assertion. All those who desire health to themselves, and ability to impart it to their offspring, ought to go to work, be wise, live temperately and obey the mandates of Heaven.

I. Of Clothing, and Treatment of the Skin as a preservative

What relation does the skin bear to the pulmonary organs? Do they perform functions, which are very similar? Is the excrementitious matter, which is thrown off by the

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skin secreted? Is not the matter eliminated by the Lungs also secreted? We believe, that the glands of the Lungs, secrete, as well as those of the skin.

That there are little glands in the substance of the Lungs, like the sub-cutaneous glands, we have not the least doubt; For they are too often exemplified, in an enlarged and conglomerated state, constituting tubercles.

Is there any similarity in the nature of these two secretions? The lungs do not serve to oxygenate the blood – But rather to decarbonize it. To deprive it, of its Carbonic substance. The skin, we believe performs, (at least in part) the same process; tho' in a less degree owing to the difficulty of access, which the air has at the blood in the capillary vessels of the skin. Yet this decarbonization may be proven, by bringing the blood nearer the surface, as by friction, heat or otherwise. It is well known to everyone

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that if blood be exposed to the air, it is soon decarbonized and becomes red; And the more completely the blood is exposed to the air – or if put under the receiver of an air pump, with oxygen, the quicker it is decarbonized. Is there any reciprocity of an action and office between the Lungs and Skin? We presume, that no one would be so hardy, as to say there was not. If one be diminished in its secretion, the other is generally increased, ~~and vice versa~~ and thus, there seems to exist an alternate dependence upon each other. ~~A few~~ instances, will more clearly elucidate our meaning; Upon a change of the weather, the surface is chilled, the function of the Skin suspended, and a determination takes place towards the Lungs, producing "Bad Colds &c"

If the Biliary system should be predisposed, the determination centres there, and we have the "Summer Complaint" of

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children. When the liver and intestines are both debilitated, and the Skin permanently chilled, a wasting Biliary Diarrhea ensues. The Lungs necessarily sharing in the oppression, the rise of scrofulous action is favored.

And as the temperament of persons, when arrived at the age of puberty must receive modifications from the habits of their infant years, it is deemed important to dwell more extensively, upon the paying due regard to the Skin of children.

1. It is admitted that the Skin performs an office very like that of the pulmonary organs, and from both, considerable quantities of effete matter are incessantly passing off.

2. This effete matter is know to consist for the most part, (indeed almost wholly,) of Carbonaceous properties.

3. In order that this Carbonaceous Matter may be

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eliminated, it is indispensible, to have a chemical agent as oxygen, which will combine with, and convey it off from the body.

4. When this chemical agent, cannot act and remove the Carbonaceous substance, it, the (Carbonaceous substance) ~~and~~ must accumulate upon the body. The atmosphere of Towns particularly ~~when~~ charged or saturated with Marsh effluvia may have the power of combining with the oxygen of the atmosphere, thereby prohibiting the escape of the usual Carbonaceous exhalations from the System.

5 It will be remembered, that the Liver has the power of secreting this carbonaceous property from the blood in the form of bile as proof of this, the blood is much brighter when it comes out of the Liver, than when it enters that organ.

6 Nature ever ready to relieve herself, when burthened, ~~to~~ resorts to the Biliary organs to deposit or to have

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secerned from her laden vessels, the surplus of Carbonaceous matter — consequently we have a double exertion of the bile secreting vessels, and a superabundance of bile &c

7. The Hepatic organs, are not the only set of vessels which are the places of deposit, upon this disasterous emergency. The Stomach, Intestines, and other visceral surfaces are forced to secrete this substance, resembling Black Vomit.

8. The blood of patients under the influence of Summer and Autumnal Fever, is unusually dark owing to the surplus of ~~xxx~~ Carbonic Acid. If the attack be sudden and heavy, the patients body becomes livid in various parts, on the same account. Persons sometimes die suddenly, from a sudden accumulation of this substance upon the lungs or other vital parts. They often heave and sigh deeply, to be relieved from the pressure or weight with which they are ~~loaded~~ sometimes loaded:

Of Hereditary Diatheses

We conclude therefore that the prostrations which lead to the Summer Sickness, is produced not by a positive agent acting upon the body, but by an indirect or negative cause, Viz: the want of oxygen or some such agent to remove and relieve the body of the incessant production of effete and Carbonaceous matters.

To defend the children therefore, and so train them that their little bodies may resist a temperament liable to visceral determinations, much attention is necessary as to the management of their dress &c.

Of Clothing more particularly

"In a climate so variable as that of the United States both the nature and texture of the materials which compose our dress, merit more particular consideration than in general is bestowed upon them". The variableness of our climate renders it extremely necessary to be vigilant

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and cautious in our dress, to meet such vicissitudes without sustaining injury. We have long thought that the inhabitants of the U. S. did not dress sufficiently warm, & particularly the younger part of them, who, under the influence of an adage Viz: "to be made hardy" by exposure to severe weather, and wearing clothing so very thin, as never to go out of the house, without being chilled. This is a fruitful source of disease, a "favorite temperer" to Coughs, Colds, Asthmas, & which but tend to introduce incipient Consumption, and too often lay in inveterate foundation for that disease. "The Dutch are so sensible of the importance of guarding the body against cold, that they wear more than double the quantity of Clothing that is customary in this Country, and it is said that Catarrhs and Consumptions are scarcely named in the Catalogue of diseases among these people."

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"The Inhabitants of Canada are in the habit of wearing flannel next to their skins; and when exposed to the "vicissitude" and severity of the weather, they are wrapt in furs. Strangers who visit our country from abroad have frequently expressed their astonishment at our thin dress, so very ill adapted to withstand the inclemency of the weather in this cold and variable climate, and they were not at a loss, to account for the Colds, Coughs, Catarrhs, and Consumptions, so prevalent among our inhabitants". The body most indubitably should be kept warm and comfortable. It is much better to have too much clothing, than too little. We would have all, to hear and know this maxim to their solace and benefit. Consult Nature, and dress to meet every variation with comfortable safety — Flannel should be worn next to the skin, and should be often changed.

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The perspiratory process should never be long checked. The skin is the grand transpiratory organ destined to secrete and convey from the system no inconsiderable quantity of excrementitious matter.

"It has been proved" says Doctor Willich "by accurate calculations s. that a man daily perspires upwards of three pounds of impure humors". The precise quantity of effete matter, however, which is thrown off by the system at the skin, seems as yet undetermined upon. But it is certain, that in different individuals, the quantity is different, more in some, less in others. But in every instance so much, that if it be checked, disease must follow. The Coparcenry and simularity of office which exist between the skin and the Lungs render it very natural to suppose that if the secretion of one be diminished the other is increased, and vice versa.

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At once then for the preservation of the lungs, the extreme importance of attending to the skin will be conceded. And when the pulmonary organs are affected, and obstructed in the proper performance of their functions, that the skin should be made to relieve them, is equally obvious. ~~And when the pulmonary organs are affected~~ ..... And that for the general distribution of the blood, and salubrity of the system, no method is more salutary than the treatment of the Skin by frictions & accompanied with proper exercise. As a general practice no expedient more happily adapted to prevent any centripetal tendency of the ~~fluids~~ blood, to a part already weak: none more fortunately calculated to diffuse the fluids equalize the excitability — and sustain the body's vigour and healthful actions.

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It might be well here to add, that the decarbonization of the blood takes place, (in our opinion) in the skin, just in the same way as it does in the lungs, during the process of respiration. Prof. Rutherhouse's experiments, to prove that no air or gas was eliminated from the skin, we conceive to be invalid, because, the cold water, into which the patient was plunged ~~into~~, so chilled, and collapsed the surface, as to suspend its action, and therefore no gas could be given off. But if we bruise our flesh, immediately, there is a black appearance, which is occasioned by the sudden decarbonization of the blood — The parts being deadened by the blow, the carbonic principle cannot escape quickly, but is retained.

The treatment of the skin by friction &c in order to promote the ~~decarbon~~ respiratory process of ~~the skin~~

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of that organ, and thereby assist the Lungs, at once appears very plausible — and it is very remarkable, ~~to have~~ how much the labour of the Lungs is lessened, by ~~by~~ inviting the blood into the capillary vessels of the skin, either by friction or heat moderately applied.

In the treatment of Phthisis we would ask the attention the faculty to these principles, that they may be tested, and valued from the results of experience.

To promote these views more effectually,

Sleeping between blankets in the winter instead of sheets, and on some hard substance in the Summer, instead of a feather bed, are practices to be earnestly recommended.

Without swelling this paper beyond the limits assigned it, or noticing a multiplicity of instances in corroboration of what we have written, And from

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a fear of being farther tedious, we must close this disquisition, with assurances, to each of the professors of the University of Maryland, we entertain the most profound sentiments of the greatest esteem.

Wishing by the propitious aid of Kind Heaven, a formidable plan of treatment may be found to resist this, as well as all other Hereditary diseases, and by it, rescue the thousands which are continually within their ~~grasp~~ sweep — But should we fail,

And "disease obstructs their lab'ring breath,
When the heart sickens, and each pang is death;"
In this we rest, and are consoled to know,
That "Religion shall sustain the just,
Grace their last moments, nor "forsake" their dust"

March Anno domini 1820.

An

Essay

on

Cynanche Trachealis

By

[illegible]

1820.

2

To

Bennet Dyson M.D.

This Essay is

Respectfully Inscribed,

as

An Humble acknowledgment of Gratitude

And High Esteem,

For His Kind Friendship

And Patronage,

By

His Most Obliged

And Grateful Friend

[illegible]

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To,

John A. Weems, M.D.

As a

Testimony of high Esteem for His Character,

and of

Gratitude for many kind offices,

This Essay

Is Inscribed,

By his Friend and Servant,

W.W.W.

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An Essay on Cynanche Trachealis.

I do not choose this disease as the subject of my Thesis because I expect to improve the treatment of it. or that I hope to reflect any light on its Pathology, that were vain But I write merely in obedience to the legally established constitution of the Medical University of Maryland which makes it obligatory on a candidate for graduation to write and defend a Thesis on some Medical subject, without at the same time bounding any orbit in which he shall move in the selection of that subject.

This disease has been perhaps the cause of more Ink shed than any other in the whole range of Nosology and in a great measure with as little effect, for it is only very lately that its true pathology has been sufficently elucidated to carry conviction to the active and enquiring mind. It seems to have entirely eluded the research of the industrious Ancients. They all appear to have entertained different sentiments both as to the seat and nature of the disease. From a few hints Hippocrates has given of this disease some writers have been disposed to take them as a correct evidence of his thorough knowledge of its nature, but when he says that those Cynanches are most dangerous which on inspection shew no marks of disease in any part of

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the fauces — One may I think very justly conclude that his knowledge of its nature was very incorrect and superficial — Indeed it is not to be expected as in his time the knowledge of the Anatomy of the Human body was very imperfect and limited. Nor does Galen's discription of the disease indicate more useful research or a more correct knowledge of its nature than Hippocrates. for he says that the increased secretion of the throat accumulates to that degree as to kill the patient by suffocation. Boerhaave was the first writer I believe who made any useful progress towards lifting the veil which had so long obscured the nature of this disease and indeed he has merely lifted up one corner displaying its inflammatory aspect in a very glimmering light Doctor Home professor of Materia Medica in the University of Edinburgh was the first who discribed it with a masters hand. Doctor Cullen has touched it with his usual accuracy but he copies from Home as he ingenuously confesses — Nor have the discriptions of this disease been more various and incongruous than its names — every Author who has discribed it has given to it a different appellation taken from some of the most prominent symptoms. Doctor Millar has called it the acute asthma. but such a term must be improper from the seat and nature of Asthma and Cynanche Trachealis being so very different. The former attacks the lungs and seems not inflammatory whereas the latter is seated in the Larynx and trachea and is very inflam

matory. Etmuller calls it Catarrhus Suffocativus. Doctor Home - Suffocatio Stridiadula. Starr - Morbus Strangulatorius Doctor Eller terms it Cynanche Laryngealis — Crawford calls it Cynanche Stridula. Rufel - Angina Inflammatoria Cullen - Cynanche Trachealis and Darwin calls it Pneumonia Trachealis - Among the vulgar in England it is known by the appellation of choak - In the United States it is called Croup and croup - And in scotland it is also known by the name of croup. a licence in ~~language~~ language somewhat unwarrantable. — Such a variety and descripancy of names only serve to shew how imperfect the knowledge of this disease was once and no doubt physicians have been misguided by them - and perhaps to this day - As it is still contended by some to be a spasmodic disease - existing in the muscles of the Larynx and Epiglottis. If so they have certainly forgotten their anatomy or have taken a very superficial view of the disease. I do not think there is a muscle or a set of muscles belonging to the Glottis or Epiglottis that have the power by their contraction to close the caliber of the Larynx or to pull down the Epiglottis sufficient ~~sufficient~~ to produce suffocation. It is said that the musculus Arytenoidaus transversus with the arytenoidaus obliquus. the former arising from nearly the whole length of one of the arytenoid cartilage goes across and is inserted into the same of the opposite side. the latter arising from the root of each arytenoid cartilage and goes

obliquely upwards to be inserted into the opposite side may contract so much as to close intirely the Rima and produce suffocation or that the Thyro Epi-gloticus and arytenoid epiglotticus, arising from the Thyroid and Arytenoid cartilages and inserted into the Epiglottis may contract to that degree as to draw the epiglottis so perfectly over the top of the Larynx or Epiglottis as to seclude entirely the admission of air into the lungs - which I dont believe — But admitting what may be possible but improbable, that the muscles may by their contraction bring the edges of the Arytenoid cartilages in complete apposition, the circumference of the Glottis would thereby be very little diminished so small indeed as to produce no ~~appreciable~~ considerable obstruction to the enterence of the air. And as for the opinion that the Thyro epiglotticus and Aryteno-epiglotticus muscles contract so as to pull down the epiglottis over the Glottis. It will be thought inadequate to a correct explination of the fact by all those who are aware of the texture of those little bands (for bands they are) perfectly divested of every appearance of muscularity - consisting evidently and entirely of cellular substance - Intended it would appear merely as connecting bands. Beside this it is candidly admitted by those who contend for the spasmodic theory that the disease is never mitigated by the use of antispasmodics but mostly aggravated. which to me is evidence that the disease is an inflammatory one. The inflammation existing in the muscles of the Glottis and surrounding parts. consequently no spasm of these parts can take place, for I believe there are no instances to be found on record anywhere else clearly substantiating a spasmodic action of a set of inflamed muscular fibres - An inflamed and elongated uvula is never affected by a spasm. nor indeed can the least contraction be produced in it even by the most irritating means until the inflammation is first subdued — But granting to the contend

ers for the spasmodic action all they have endeavoured to sup
port. they will have to argue what is not the case - a profound erudition in the action of causes or totally abandon this ground
—— For I cannot conceive how any cause should act on those muscles which are said to contract to close the Glottis to the exclusion of those which by their action would enlarge the Glottis and open the Rima - for there are two which evidently have this effect and their action would counteract those which are said to close the Glottis and Rima - they being larger and I suppose stronger. Those muscles are the Crico-arytenoideus Lateralis and the Thyro arytenoideus. the former arising from the Crecoid cartilage and is inserted into the base of the arytenoid the latter from the Thyroid cartilage and inserted into the fore part of the arytenoid. both of which mingle their fibres very intimately with muscles that are said to contract the glottis. viz. The obliquus and transversus arytenoideus and the Thyro epiglottideus — so intimately indeed as to be impossible to separate them by the most careful dissection. rendering it very improbable if not impossible for any cause to act on one set of fibres without at the same time affecting the others. ——

The cause of Cynanche Trachealis seems principally to be a long exposure to inclement and sudden vicissitudes of weather - But in some varieties of Pneumonia the inflammation may extend so high up the Trachea and even to the Larynx as to produce all the symptoms of a true Cynanche Trachealis - And there would seem to be in the Trachea

and Larynx a peculiar predilection to be affected in all cases of Exanthematous fevers. sometimes before the eruption shall have appeared and is almost invariably the case. When by any accident the eruption is caused to recede or is repelled — All the varieties of Cynanche may extend to the Larynx and produce true croup, except the Cynanche Parotidea which is thought an exception to the general rule, having been never known to affect the Larynx or trachea in such a manner as to produce this disease. —

From the dissections of Morgani Baillie and many others who have undertaken this operation with minds unbiased by prejudice in favour of preconceived opinions — evident marks of inflammation have been discovered — either in the muscles belonging to the Glottis or on the inner surface of the Larynx or in the Trachea — sometimes extending to the lungs themselves — The muscles about the Larynx have been found so much enlarged and inflamed as to induce a belief of their total incapacity to perform their intended office — though the inflammation of those muscles would not produce any very pernicious consequences if the inflammation did not attack other parts of more importance. The mucous membrane of the inner surface of the Larynx is always found diseased also the little columns which appear in forming the ventricles of Morgani are found much inflamed and enlarged — so much so as almost to close the orifice of the Larynx. which with the copious secretion

of viscid mucous above falling down into those ventricles may I have no doubt produce a permanent obstruction to the admission of air into the lungs — this circumstance I am inclined to believe is the most frequent cause of death in this disease. But the inflammation does not terminate here its ravages have been traced even in the air cells of the lungs themselves.

The symptoms of this disease are pretty uniform except when the Lungs are affected which circumstance should be attended to particularly in the treatment for reason to be assigned. It generally commences with a slight pain and soreness about the glottis with hoarseness. respiration difficult and rattling cough ensues — and commonly dry though if anything be spit up it is a matter of a purulent appearance generally no apparent tumour in the throat yet sometimes there is inflammation and swelling. deglutition but little affected. fever evidently inflammatory, pulse sometimes small in general hard and concentrated — except when there is much obstruction to the entrance of the air into the lungs the heart is then feeble the pulse soft and compressible depending upon a diminished energy of the Brain consequent to not having the blood propeled to it in a pure and elaborate state as is necessary to the healthy and vigorous function of that important organ the stomach and intestines are very torpid and

inactive depending also upon a diminished energy of the brain together with these symptoms there are great restlessness and uneasy sensation of heat. From the nature of these symptoms and appearances on dissection. if we judge rightly of its nature it is obvious that the cure of this disease requires the most powerful remedies for inflammation and to be employed upon the very first appearance of the symptoms. — for when the inflammation has proceeded far, — but few or any remedies will arrest its progress — The remedy of most importance in the treatment of this disease is bleeding. which should the symptoms be violent should be carried so far as to produce some very sensible impression on the system at once. even to deep syncope and repeat it as often as the symptoms may exacerbate. We not only gain by useing the Lancet early and to the extent in reducing the inflammatory action about or in the trachea but we gain by awakening the sensibility of the system to the action of medicines thrown into the system. which would otherwise produce no action in consequence of the torpor of the system — When after the use of the Lancet the inflammatory action shall have subsided and leaves a collection of mucous which obstructs very much the respiration. emetics are advised with great confidence but should not be employed without due regard to the state of the Lungs. When they are affected as is sometimes the case, such medicines may do harm. The inflammation of the Lungs is often difficult to be distinguished. unless the physician takes into consideration several circumstances. which always happens namely

that there is often an expectoration in the incipient stage of Pneumonia which is not the case in croup. There is no blood mixed with the sputa in croup which is generally the case when the lungs are affected and that in Pneumonia the pain is very much increased on coughing which is not the case in croup — By taking those phenomina into consideration one I think will seldom be deceived as to the propriety of an exhibition of emetics. When those medicines are thought advisable the usual doses will have no effect in this disease. in general they must be double to produce any action. The emetics which are chiefly relied on are those taken from the mineral kingdom. Such as the Sulph Zinc Sulph: Cupri and the muriate Mercy. Those from the vegitable kingdom are thought by the best physicians too inert to be confided in unless the disease be very slight. No general rules can be laid down by which a physician may be guided in the administration of the above medicines. except that they should never be given during much inflammatory action. he must be guided by the strength of the disease and other collateral circumstances. The general range of doses of the Sulph Zinc are from 10 grains to a scruple from that to ℥ss or ℥iss That of the Sulph cupri from 2.4 to 6 grains given dissolved a small quantity of water and that of the mercury is about a grain dissolved in about three ounces of water given in doses of about a Tea spoon-full every ten or fifteen minutes — This medicine will operate when no other

will therefore should always be resorted to when there is much torpor of the system accompanied with much obstruction of the Trachea by phlegm or mucous. This medicine like others should be regulated in its administration by the effects it produces on the system and the strength of the disease. Should it produce any unpleasant effects such as violent vomiting Diarrhea or excessive heat in the stomach. they may be easily checked by a little weak toddy or a few drops of laudanum with some aromatic. Emetics are not exhibited with more advantage after the inflammatory action is reduced than in the forming state of the disease. there are then invaluable remedies assisting often at once the progress of the disease. Emetics are advised to be combined with cathartics and as a cathartic Calomel is thought ~~the most~~ preferable they should be given in very large quantities. When this mode of administering emetics is preferred. they milder ones should be used such as the tart. Antim. Polap and Spicac. But after all that has been said in favour of emetics. the Calomel is is thought should be prescribed (saving the lancet) to all other remedies. It is advised to be given in every stage of the disease and when commenced with should be continued for several days or until there is a total cessation of every symptom of the disease. Large doses should be exhibited as small ones have little or no effect. An inattention to this circumstance has been the cause it is thought by men of much celebrity in their profession why mercury has so often failed to cure this disease. It very seldom produces salivation in children especially those that have not cut their teeth. A salivation when produced augers very favourable. patients seldom die when this affection takes place. Though a salivation

is by no means necessary to cure the disease. as it is more often subdued by mercury without the least appearance of a salivation.

Senaka is spoken of highly by Doctor Archer but not without it is thought at present considerable exaggeration it is a very heating and stimulating remedy and should never be employed in the incipient stage of this disease or during any inflammatory action. It may be given with some advantage when there is much secretion in the trachea without any inflammatory symptoms. The common diaphoretics seem to have but little effect in the incipient stage of this disease as it runs its course too soon to admit their operation to be of any service. When the inflammatory action of the disease shall have been subdued by more powerful means leaving a dry skin and a little cough. diaphoretics may be then used with advantage. especially when accompanied with the warm bath. which last should be under the same restrictions with Blisters and other stimulants much inflammatory action should always deter the use of them. The warm bath is a very valuable remedy in this disease (as well as many others) when used in the proper stage of the disease. but injudiciously employed is little [illegible] an edge tool in the science of Medicine Blisters are of much service when applied in the latter stage of the disease or when all the inflammatory symptoms shall have been subdued they should be applied so as to keep the system constantly under their impression until the disease is cured.

Inaugural Dissertation

on Hydrothorax

Submitted to the examination of

the medical professors of the

University of Maryland

for the

Degree of Doctor of Medicine

By Edward. H. Birchett

of Virginia.

March 1820

Was there any mode to be adopted by which I could avoid the destiny assigned or imposed on me by the mandates of this school, the diffidence of modest youth, alone, would induce me to seek it; but as the command is so insuperably impinged on me, I have essentially to cast an eye to some subject, the combination of a few facts on which, will it is hoped be commensurate to the objects of this formal demand — The motives by which I am induced to give the preference to this subject, I would mention to be, the advantage which

would accrue from the knowledge I should thereby obtain; and from a satisfactory impression that a familiar acquaintance with its history would be a valuable acquisition to him that is engaged in medical pursuits.

This disease has unfortunately never been the subject of as able investigation as diseases of much less importance, excepting the attention paid it by a few authors it has remained in a neglected an obnubilated state truly lamentable; And I regret that propitious fortune has not favoured me with any fact that would be fruitful in the developements of its intricacies ——

The most difficult part of this disease as well as every other has been the discovery of its pathology

It is a fact well known by anatomist and physiologist, that a subtile fluid is constantly exudeing from the capillary extremities of certain vessels termed from their peculiar office exhalents into all of the cavities and ~~[illegible]~~ interstices of the humane body. These fluids thus secreted are intended to answer important purposes in the animal economy. But in order to obviate the inconveniences that must arise from the accumulation and stagnation of ~~these~~ such fluids, another set of vessels, termed from their office also absorbents open by innumerable

mouths into these cavities, take up and convey to the blood these fluids, as soon as the purposes for which they were effused, are answered". Thus in health a constant deposition and absorption are going on, and a due equilibrium is preserved in every part by means of these vessels. It frequently happens however, from various causes, that this balance is disturbed, and the disease termed dropsy may ensue from either, increased exhalation, or from diminished or from both.

When the arteries are increased in their action and the lymphatics do not keep pace in removing this secreted fluid a deposition takes place constituting dropsy. This preternatural collection is evidently the consequence of an inflammatory action, which is verified by every symptom and

also by the fluid secreted — This fluid is not as Dr. Rush supposed the serum of the blood "for at 160° it does not coagulate" but it is a fluid sui generis" which is manifested from the variety of its appearance; sometimes we find it of limpid colour, and at others again of a dark appearance similar to that of port wine. I am disposed to think that we cannot correctly ascribe this difference of colour to any other cause than inflammatory action. For when we take a comparative retrospect of other inflammatory diseases, we see an essential variation in the quantity and quality of the secretions; which modified is in proportion to the violence of the inflammatory action that exists

As illustrative of this derangement of the secretions I will mention the Measles which presents us with an increased secretion and flow of tears, and the semen itself when examined is found to be tinged with blood —

Symptoms — Though we might have such symptoms as would distinctly characterise it from other diseases with which it might be confounded yet observation has explicitly shown that the absence of some of these symptoms and indistinct appearance of others, renders the capability of discrimination immensely difficult, and the appearance of it, is frequently so obscure as entirely to elude the

investigations of the most doubtful observer
The inaccuracy of nosologist in pointing
out such symptoms as generally introduce
the existence of the disease appears
to have sympathised with the obvious
neglects of the other parts of the subject.
As one of the constituents of this composition
I shall present such precursors and
diagnostics as the present latent condition
of the subject will permits -
From the history of the disease we
have as one of the first indications of
its existence, an anxiety or oppression
at the inferior portion of the thorax
This anxiety or oppression will not
be perceptible at all times, but may
readily be excited by bodily or mental
exercise -
The pulse which has been entirely overlooked

by some, and but obscurely seen by many, when examined is often found to be "irregular, intermittent, or oppresed varying in strength and frequency from the slightest causes accompanied with occasional palpitations or corresponding interuptions of the action of the heart;" but when exempt from the causes that occasionally excite this variations it gradually returns to its prestine situation. This deviation of the pulse will often be the first symptom to indecate the presense of the disease —

The respiration may be easily accelerated, particularly after the disease has been of some standing, for the patients taking a little exercise so as, to produce fatigue will feel an inexpressible sensation to inspire a large quantity of atmospheric air ——

When the disease has attained a more compleat form, the impeded respiration becomes considerably augmented by whatever accelerates the circulation. This symptom is of almost uniform occurence, and it is said often to lead to a pretty accurate determination of the quantity and seat of the water, and also to the diseased state of the thoracic Viscera. "The respiration is sometimes quick hurried anxious and irregular, again it is slow, and ~~irregular~~ laborious, and connected with a peculiar wheezing noise attended often with a considerable disturbance of the function of the heart and lungs. These symptoms are said to resemble much the appearance of asthma; but we may distinguish

its presence from Hydrothorax, by Asthma returning in paroxisms, with remarkable remissions; and the paroxisms terminating with a cough followed by a copious expectoration; their is also in Asthma a greater stricture across the breast and a peculiar wheezing noise, and we also have a perspiration of the head neck and chest

Their appears to be no individual symptom of Hydrothorax that can be taken as a certain diagnostic; though some authors give it as their opinion that the patients being suddenly aroused from sleep by a sense of suffocation, is an undoubted sign of the disease. Some again as a diagnostic have relied on the fluctuation of the water in the thorax Bichat says by pressure on the abdomen the sense of suffocation is increased. I should think any of these symptoms with other signs

of dropsy would furnish sufficient evidence of the presence of this disease. In the advanced stage of the disease their is an inability to lie in a horizontal position, though when the quantity of water is small, the patient may do it with little inconvenience, yet an elevation of the thorax is prefered.

It has been observed that a small quantity secreted suddenly produces the same disagreeable sensation that a large quantity would if collected gradually. When the stage of the disease is such as to permit the patient to lie in a recumbent position he is often disturbed with a sense of suffocation, oppression, and extreme anxiety about the precordia; thus step after step the disease approaches to an accumulation of other inconveniencies until the

unfortunate sufferer no longer finds repose in the recumbent posture, but next seeks that which imparts most comfort. The countenance gradually exhibits the appearance of a serious disease, and it has been even so entirely invested with such features that the aspect of the "facia pallor of Chlorosis, the bloated hue of the bilious habits, and the yellow tinge of the jaundice are said to convey but imperfect ideas of it — The Chlorosis that puts on features similar to this disease are those cases in which their is more or less palpitation and in general dyspnea, but the reverse to what takes place in Hydrothorax we have an abatement or removal of these symptoms by puting the patient in a horizontal position —
The circumstance of Chlorosis taking place about puberty and the sallow and yellow

appearance of the face and the remark=
=able whiteness of the tunica conjunctiva
enables us to draw a conclusion as to the
presence or absence of either of them —

The urinary organs are also disturbed
in their action; generally the secretion
is gradually diminished, and in
proportion to this diminution we have
it of higher colour; The quantity
and quality depends mostly on
the slow or sudden collection of the
water in the thorax — when the accum=
=ulation of the water is in a short time
the scantiness of urine will be the
first symptom —

There is often present a palpitation of
the heart with an irregular pulse, as its concomitant
the palpitation being sometimes so distinct
as to be obvious to the eye and in other
instances it is only to be ascertained by

placing the hand on the thorax opposite the the heart and useing such stimulants as will augment its action —
It is said that a palpitation of the heart is one of the affections that may be mistaken for this disease, but the palpitation not being attended with the usual symptoms of dropsy readily discriminates them —

There is an anasarca of the lower extremities, attended frequently with a degree of coldness and numbness this symptom like the palpitation though it usually attends some stage or other of the disease is found to appear at no particular time; the swelling appears first in a partial manner, disapearing in the morning and returning in the evening from the exercise of the day There are some instances however that this swelling ~~it~~ is found in the upper extremities and neck particularly in the morning —

Treatment - In selecting our remedies we should be as the skilful fencer that for the safety and preservation of his body brings with facility and promptness his weapon to each and every guard that necessity may claim. For in the management of this disease it appears indispensibly necessary to investigate the causes and circumstances connected with its existance; as the ultimate success is indubitably dependant on the prudent selections and exhibitions of the most appropiate remedy —

As we find this disease at first highly inflammatory, Venesections constitutes one of the most import remedies, and it should be repeated until the inflammatory action is entirely subdued — The thirst pain in the side, and oppression are circumstances strongly indicating its —

In that form of dropsy accompanied with high action and excitement of the system ~~so common~~ as a remedy so consistent is it with correct practice as to be frequently found absolutely necessary in many instances for the preservation and even the safety of the life of the patients -

It is manifested by experience that in employing the lancets in dropsical cases, the most eligible mode to be adopted, is to take a small quantity of blood at a time and repeat it as often as exciting circumstances may demand As auxiliary to bloodletting the mild Cathartics will be found very beneficial, they conduce to the diminution of febrile action and also measurably promote the action of the absorbents

After sufficient evacuation we may recur with great advantage to blisters, but they should not be used in the inflammatory stage of the disease Dr Chapman observes in his Therapeutics "of the efficacy of blisters in Hydrothorax their is not the slightest doubts. This disease in the commencement is generally I believe of an inflammatory nature, and demands very active depletion, with the aid of a constant irritation on the ~~[illegible]~~ chest. Even in the advanced stages some temporary mitigation of the more distressing symp-toms is sometimes derived from the same measures"-

If the disease has not been cured by this treatment we may next resort to diuretic remedies as we now have the system prepared for their action "No one indeed can fail to have

observed the activity of absorption in most cases of debilitated circulation, and how imperfectly it proceeds where the pulse is febrile or excited. Instructed by this very obvious fact we should always in the use of diuretics watch attentively the state of the system and duly regulate it by occasionally recurring to depletating remedies" The diuretic to be used is left to the choice and discrimination of the practioner —

The remedies to be employed in a feable and weak state of the system should be stimulating diuretics. The Tincture of Cantharides in atonic dropsy is a very important remedy. When given in doses of a dram or more in the course of the day it has produced copious

evacuations of urine without producing any strangury —

May it not be correct to infer from the good effects of strangury produced by cantharides in some cases of Typus, Pertussis, and other diseases connected with debility of the system, that if strangury was induced in this stage of the disease, might we not expect a similar advantage from the impression occasioned by it on the system.

From analogy I am inclined to suppose that if strangury, was produced it is probable that it would so subvert the morbid action of the exhalents as to diminish or temporarily suspend the secretion, and that Mercury afterwards gradually administered would increase the action of the

absorbents so as to evacuate the accumulated fluid, and at the same time its action on the system would produce so perfect a balance as to enable it to attain and preserve its health.

This disease is frequently associated with Visceral affections, and in consequence of this Mercury becomes the only remedy on which we are to confide, and when ptyalism is induced we may consider it an auspicious symptom.

"Denique

Nullum est jam dictum, quod non dictum sit prius"

(Terentius. Proloq: Eunuch.)

Dissertatio Inauguralis,

De Gastritide,

Quem annuente summo numine

Viro admodum Reverendo,

Jacobo Kemp D.D. Præfectus,

Caterisque Gubernatoribus,

Academiæ Terræ Mariæ,

Nec non Excellentissimæ Facultatis Medicæ,

Pro Gradu Doctoris,

Examini quorum eruditi

subjecit,

Josua Bond Terra Mariæ ortus

Soc: Societ: Medicæ, Terræ Mariæ,

Anno Domini MDCCCXIX.

Ioanni B Davidge A.M. M.D.

Artis incidendi in academia I. M.

Professor

Hanc opellam in sua venerationis

Testimonio,

Dat

Dicat

Consecratque

addictus

alumnus

Auctor.

Cosmo G. Stevenson M.D.

Nec non

Ioanni W. Buckler M.D.

Ob suas bonitates erga eum ac ut

se non eorum oblitum esse

ostendat

Hoc opusculum,

multis votis bonis

Offert

Auctor.

Præfatio.

Omnibus tam bene scitum est juvenem incipientem multum de novo non affere posse? Tempus, experientia multaque ei alia desunt, ac si lege mandata scribat, in obedientia signo, magis quam ingenii specimen ferme recipiendum est. Quid nunc a me profertur, non attentione multa dignum est fateor. Sic sanè velociter (tametsi optimo in meo modo) leges morigerari conavi. Spes est mihi ut hujus lectorem candide benignitèrque dijudicaturum esse.

De Gastritide

Morbus de quo est in animo tractare, nomen suum ex lingua Græca receptus est, ac eum "ventris aggressorem" significare dicitur. Nomen nobis usum est tantùm ventris inflammationem indigitare ac hocce in modo nunc nobis uti placuit.

Doloribus ardentibus, calore ac adstrictionis in stomachi regione sensu, vomituque ingente, cùm illum devoratum est auctò, virium animalium magna prostratione

De Gastritide

gastritis facile dignoscitur

Aegro est stomachi dolores, ingentes ardentesque; vomitus vehemens praecipuè post cibi aut potus devoratione, situs miserrimus, jactatio, anxietas debilitas magna, vigilatio cum pulsu veloce, duro ac contracto sequuntur.

Morbus si ingravescit vires sternuntur; syncope, dyspnaa, madores singultus, manuum pedumque frigor, pulsus intermittensque ostendit.

De Gastritide.

Gastritis in duas divisa est species, una, phlegmonodea, altera erysipelatica medicis vocantur. Quarum prior, communior ac notior, altera, in alterorum fine tantùm morborum ac lethale est, accidit.

Gastritidis causæ late omnibus patent; scilicet potus calidi, metalla venenosa, seu vegetabilia virulenta, potus meraciores, liquida perfrigida quum corpus calefactum est capta, omnes hunc sævum excitare ~~mor~~

De Gastritide

morbum possint.

Morbi infrequenter hujus finis est bona quia stomachus tam ad vitam necessarius est, ac magnum systemate nervoso consensum habiut; vires corporis subito lapsi sunt, et vel gangrana vel mors subita eveniunt.

Suppuratio ab Gastritide accidat. Signa si antequam data magis quam dies VIII vel X manere observata sunt, doloris

cum remissione, dum anxietas et ponderis sensus manent, nobis suppurationem adesse putare liceat. Die morbi quarto si plenus mollisque fit pulsus ac minus frequens cum doloribus gradatim amoventibus, urina cedente retrimentum vel diarrhoea eveniente, spes ægri vitæ recepta sit.

Permulti auctores de stomachi exulceratione fusè allocuti sunt; sed est mihi dubium utrùm æger donec hoc supervenial, vivere possit.

De Gastritide.

Cadaverum exsectiones gastritidis mortuorum ruborem tunicæ internæ cum lymphatis effusione, porro crassitiem stomachi partialem auctam, indigitata sunt.

Curatio.

Cuicui morbum hunc qui curare vult, non vacillandum est, quicquid faciendum esse, velociter factum sit. Venæ seu arteriæ si magis tibi placuit, pulsu negligente secandæ sunt; sanguis mittendus donec vomitus, dolor,

De Gastritide

ac periculum evadunt.

Si recte sanguis extractus est nil medicaminis nil cura opus. Postea, medicamina tonica exercitatione propria juncta valetudinem firmabunt.

Parvo sic in modo opus meum festinantèr exegi ac nunc mihi grata meis vota praeceptoribus offerendum est. Illis omnibus vitae dulcedines, animi gaudia, quantùm ut possim voto. At iis multa recipi, iis

De Gastritide

nihil nisi gratitudinem est mihi dandi.

An
Inaugural Essay
Consisting of
Observations on the Temperaments
Submitted to the Consideration
of
The Right Reverend James Kemp, D. D. Provost
and of the Regents and Medical Professors
of the University of Maryland.
For the Degree of Doctor of Medicine
By
John B. Rutledge of Harford County, State of
Maryland Vice President of the Medical
Society of Baltimore and honorary
Member of the Medical
Society
of
Maryland.

1822.

muscles having certain expressions
cause of these expressions or enlargement

To Doctor Samuel K. Jennings
of Baltimore.

Under whose direction I commenced my Medical Studies
To whose kind attentions, I owe my existance as a professional
Character.

To you Sir, I should be unjust were I not thus publickly
to acknowledge my gratitude for the numerous favours bestowed upon
me, while resident with you, by Yourself and Amiable companion;
whose pious and righteous examples, with the respectfull attention
always shewn me, will be ever pleasingly remembered as well as
the unremitting care and paine you have taken to facilitate
my research, and enlarge my Capacities.

Allow me to dedicate to you the first fruits of my Youthful
pen as a tribute of respect and Esteem for your liberality. Not
that in having done so, the Obligations I am under will be
Obliterated: but that I gladly seize the favourable Opportunity
of making known to you how sensibly I feel them, and the
Sincere wish I have for your future health and happiness, as
well as for those who are the Subjects of your Charge. Hoping
they may be Standing pillars in the House of God, that their
hearts may be flaming Altars and their tongues golden Harps
to sing his praise, that you may ever have the Garment of
praise for your covering and that the great father of all
that is good and great, may ever carry your Names engraven

on the Stones of his breast plate. That holiness, Virtue
all Savory and wholesome knowledge, and whatsoever
praiseworthy may flourish and be ever Verdent within
your Walls

is the Sincere and Ardent wish of your af
nate friend and former Pupil

The Author.—

Observations
on the
Temperaments.

The following hasty and imperfect remarks on the temperaments, are grounded on the conclusion that the General Character and habitudes of the mind, as well as the constitutional tendencies of the body, are depicted on the Countenance.

There appears to exist in all Persons, a Natural and perhaps, instinctive propensity to interpret mental and moral qualities by signs which Physiognomy presents, and this propensity is evident in those who deny that there is any thing like a Science of expression. One thing is certain, that if any reliance whatever is to be placed on expression, that expression must depend, first on the permanent form of the Countenance, and secondly, on the changes which it occasionly undergoes.

If unchangeble Characters of feature and complexion can be seized, and indentified with certain intellectual and moral attributes such concomitance being ascertained in a sufficient Number of Instances, the Science of expression, as far as it goes, becomes inductive. It may not extend to many cases in which we may feel an anxiety to apply it, but it holds no less certainly in those in which the connection between animal forms and intellectual and moral powers and habitudes has been constantly detected.

Having paid considerable attention to the arguments employed

by numerous Objectors to Physiognomy as a Science, I am persuaded they are grounded principally on the wrong Notion entertained of its Object, on indefinite and obscure perception of the difficulty of Understanding the real Connection between form and expression.

The truth and certainty however of the effect produced upon the Mind and feelings which I have thought proper to denominate expression, and the Cause of the Connection between particular forms and such effects, are entirely distinct questions. Of this effect, perhaps, no further account can be given, than that in its radical and essential character it depends on the Ultimate principles of our Mental and Moral Constitution - principles which intuitively lead us to assign intellectual and moral attributes as the causes of those sentiments and emotion which the Countenance of one Man produces upon another. What other Account can be given of the general fact that certain material forms produce in us the feeling which we term sublime, others the beautiful; that some Countenances excite in us great or tender emotions, attract or repel us, or inspire us with respect or aversion, What other account can be given of the general fact, than that it depends on the ultimate Constitution of our Nature and the Will of the Being who made us. The basis of all this must be intuitive. But in proportion to the Number and accuracy of our Observations, on the coincidence between Mind and the Signs of it; in other words, in

proportion to the judicious application of a Natural faculty will be our success in the interpretation of nature in this difficult and hitherto very imperfect department of Science. The require for this branch of knowledge, what every Metaphysician is aware is granted to all others, the admission, that of efficent causation we know nothing; and therefore that although we may never be able to understand the Mysterious connections between certain animal forms and certain mental and moral qualities, the former may be admitted and recorded as signs of the latter, if experience shall have shown between them a constant concomitancy, although no necessary catenation. It is in the interpretation of these signs, and in their accurate arrangement, that we must employ ourselves, if Physiognomy is ever to become inductive, if we are ever to arive at those solid and imperishable data which distinguish the Legitimate deductions of Science from the illusions of fancey. Galland and Spierzeim have fully understood the principles here enunciated. They appeal to facts and observation for the truth of their conclusions: whether at such tribunal the System will be condemned or established, I undertake not to determine.

The suggestions here attempted, appear so obvious, that with our present views of the real object of Science, I should not have deemed them necessary, if the Objections to which I alluded had not

convinced me that inteligent Persons entertain erroneous notions of the Object of Physiognomy. On such I would urge the recollection, that many of our most important conclusions in other branches of knowledge, are matter only of inference — that it is with signs only that we are conversant, but that our inferences from these are as certain and satisfactory as if those inferences themselves were actually the Objects of sense. The great Creator has shrouded himself behind the Scenes of his visible creation — Our knowledge of his existence, power and attributes, is strictly inferential and derived from the Sensible Phenoma the hieroglyphic signs which Nature presents to us. It is from these alone that we infer recognize, and acknowledge the mind which shines from the face, and gives life and import to every feature. The same reasoning applies to our knowledge of the intelligence and dispositions of those around us Here also it is with appearances only that we come in contact, for mind is not an Object of Sense nor can the existence of any sentient being except Ourselves be matter of experience, but such is the constitution of our Nature, that we repose with undubitable certainty on the conclusions to which we are led by the sensible phenomena which the actions of living and inteligent Agents bring to us — Sensible phenomena, then, are the evidence

of Mind even as to its essential existence and the elementary Principles of Physiognomical science rests upon the same unshaken foundations on which depend our belief of a supreme intelligence, and of the existence of the beings who surround us.

If the Author of the Universe has conjoined any two events, it is not for us to tear asunder the connection, because it may appear to be arbitary, or in other Words will not square with our notions and theories. If for instance a thick lip should be found to announce a disposion to sensual indulgence; if a retreating Chin should be found to denote imbecilely, and an advancing one intrepidity of Character; if in a hundred instances, a Specious Arched forehead should be recognised as the Symbol of intellectual Magnificence, are we to assert that there is no dependence to be placed on such appearances, because they can have no connection with the intellectual and Moral Qualities which accompany them. What is this but to dispise the Means which kind providence has placed in our power of acquiring a knowledge of the Mind and its peculiarities from the signs which Nature has established, and to Counteract in this instance one of the primary Laws of our Mental Constitution. — These remarks are premised, because any Observation on the Temperaments must take for granted the conclusions to which they conduct us.

The Temperaments unavoidably connect the Science of Physiology and Physiognomy. One part of these discussions involves the consideration of complexion, feature &c. as mental and moral indications; but the subject becomes more interesting, when considered also in a physiological point of view. Before we can ascertain the temperament we must be well acquainted with the signs by which it is indicated, These constitute the Moral expression, and are the Physiognomy of the subject. Our next inquiry will respect the influence of mental emotion on the Physiological functions of the body.

The influence of some of these emotions will be exerted on the nervous, of others on the muscular and of others again on the circulatory system; sometimes particular features only undergo a change, and the nerves and muscles appropiate to the part become expressions of a particular feeling or passion. In the natural course of investigation, we shall eventually proceed to ascertain and determine the tendency of the mental and moral constitution and habitudes, not only to influence the functions of vitality, but to produce organic changes and lesions, and their Physiognomical signs will become the indications of a predisposion to a particular disease, and may conduct us to the most judicious modes of counteracting and averting such predisposition

Dessault has observed that during the agitating period of the French Revolution, Organic Lesions of the heart, and an„ „ eurisms of the aorta, became exceedingly frequent, ascri„ „ bable, no doubt, to the combined influences of Grief and terror. — Some curious Observations will be found in another part of these Fragments, on the Physiogno„ „ mical Changes which the french Countenance has undergone, to which I forbare alluding, as not being immediately Connected with my Subject. — I shall how„ „ ever Venture to remark, that Seriousness, gaiety, and Moroseness are characterized by their particular effects on the physionomy and principally by means of the muscular System, that consequently Mental and moral habits must communicate in time a permanent and unchan„ „ geable expression. Continued and deep thought Causes the Muscular structure to become unusually contracted.

Expectation and Surprise, consequently a life principally passed in the employment of the external Senses have a tendency to produce a relaxation of the Muscles.

Anger moves the blood in wider Columns and more rapid pulsis, and distributes it over the Surface of the body, especially directing it upwards, and suffusing the forehead & face, Fear on the Contrary, has a tendency to accumulate this fluid about the heart and in the larger Vessels, to render the

countenance pale and shrunk, and to induce dryness of the tongue and fauces Enthusiasm animates the Countenance has a tendency to produce a vigorous and equable flow of blood through the great Organs of the heart & lungs, and by a free distribution of it to the surface to communicate a healthy hue to the exterior, Lord Bacon therefore, with his usual justness and accuracy of observation, has remarked, that among the means of promoting health, are to be reckoned Heroic Hopes.

As another proof of the influence of mental constitution on the great physiological functions of the body may be mentioned, the well known fact, that Charles the XII. could indure, and sleep in the cold of a Winters night, which would have distroyed most of the men in his Army, and was frequently in the habit of doing so during his Campaigns. — Dispondency on the Contrary, by making the heart beat more feebly, favours the accumilation of the blood about the head, and deminishes the action of the Liver — Persons of melancholice temperament, therefore are liable to insanity, and affections of the digestive Organs —

I introduce these remarks for the Purpose of showing the intimate connection between Physiognomy Physiology and Pathology and that a view of the

temperaments must include much which belongs to each of those sciences, respectively.

The division of the Temperaments, first established by Galen, was originally founded, as is well known, on a chemical hypothesis. The hypothesis has disappeared before the advancing light of science, but the division itself being a good one for practical purpose may be allowed to stand, though the theory in which it originated be demolished. I pretend not to vindicate this division, however as complete, but I apprehend that persons will be found possessing the qualities physical and mental in various combinations, which I have arranged under the heads of the different Temperaments, and therefore the common division of them may be allowed to stand without any reference to fanciful theory of these causes, to record the connection between Organization and function, between the Organization also and certain intellectual and moral attributes.— The physiologist, whose eye has become unscaled at the pure fountains of modern science, pretends not to penetrate into the essential causes of the phenomena which the science has unfolded and recorded.— The Laws of our frame, however, may be accurately developed and explained without our being able to understand the Ultimate Composition of its elements, or to define the Nature of those inscrutable powers which pervade, animate, and impell it.— Again though an inseparable connection be observed between the brain and its

functions, though on the size and developement of this Organ appears to depend the range of intellectual and moral powers, from Man down to the meanest reptile; though the grand distinctions of intellectual energy seem to hold a coincidence with the bulk and shape of the anterior lobes of this Organ, still we are by no means prepared to assert, that we understand the connection, on the contrary, for aught we know it may be entirely arbitrary; and the real and intrinsic qualities of granular matter may not be more numerous nor important than those of so much of the clods of the valey out of which we are informed on the highest authority, it was Originally compounded.— One thing is certain, that all the theories which hitherto have attempted to account for the intellectual functions, from the simple fact of Organization, are futile and absurd; and that all explanations consequently, of mental phenomena, derived from the known properties of matter of whatever discription, are the mere presumptions of hypothesis. The fact of the coincidence between a certain state of matter which we term Organization, and the existence of Mind is all we know on this mysterious subject. The attributes of that Mind, even its simple perceptions, much less its moral and intellectual powers; its capacity of looking before and after; its thoughts which wander through eternity; its notions of moral accountability; its wonderful powers of generalization and abstraction receive no satisfactory explanation whatever from any of the known properties of matter

which our discoveries or Observations have hitherto reached. The term Organization only expresses an Arbitrary and intentional disposition, and such a disposition can add nothing to the primary and intrinsic qualities of mere matter. The most rational conclusion, therefore, is that mind and body are toto cælo, different, different in themselves, and different as Objects of human Study. — The most satisfactory deduction of philosophy, with regard to intellectual phenomena, seem thus to substantiate a doctrine from a higher tribunal;* a doctrine the direct of opposite materialism, at which, after all, our Nature cannot fail to revolt, and in which those who are anxious to degrade it can alone find a triumph. We profess not then in Found philosophy to understand the connections between Animal forms and intellectual and moral phenomena, our only business is, to record these connections as facts whenever they are presented to Our Observations.

The division of the Temperaments presupposes that the predominance of any particular System of Organs, modifies the whole economy, impresses striking differences on the results of the Organization, and has an influence on the moral and intellectual, as well as on the Physical faculties.

This predominance establishes the temperament, and may be considered as its cause and essence. With these preliminary remarks

* There is a Spirit in man and the inspiration of the Almighty giveth him Understanding. — Job:

I shall proceed to the division, into the Sanguine excited most readily, but slightly - The Choleric, excited readily and violently. The Melancholic, excited slowly, but more permanently, and the Phlegmatic, excited with difficulty.

The Sanguine temperament offers itself to our notice by the striking characters of a blooming and ruddy aspect by what is usually called a fair complexion and by an animated countenance, the more florid the complexion the more sanguine, as far as this single circumstance is concerned, the character which it indicates.

Such a complexion Physiologically considered must arise from a free distribution of blood, to the surface of the body, sustained by the hearts vigorous and widely diffused action; from a plastick easily permeable, exquisitively injected coppillary system, and from a fine and delicate article drawn over the subjacent vessels, in a free and yeilding manner.

This temperament is indicated by distinct and well formed features, and by their unconstrained and flowing outlines; the countenance and general contour, exhibiting easy undulating lines, blending into each other, rather than acute angles and sudden tortuosities, and presenting the appearance of elegant and voluptuous forms.

In the most exquisitely Sanguine, there is nothing abrupt, even where the features join each other, and the waving and continuous

line gives an air of harmony and facility to the Countenance; especially when viewed in profile.

The Muscular parts of the Countenance, and form, and, consequently the general expressions are soft, though distinct, from the abounding and elastic cellular Membrane; as the compressed and compact character of Muscles, arising from the condensation of the cellular Membrane of the body is indicative, on the contrary of the Cholozic temperament.

The Sanguine Temperament is further indicated by the light Colour of the Hair and eyes; by the animation but scarcely ardour, of the latter; by the easy and voluble motions of the body combining grace and variety; and by the general en bon point, which is the effect of the vascular and cellular structure I have indicated.— With this Temperament, of which the Physical circumstances I have stated are the indications; is Combined a Mind quickly susceptible of emotion; but the feelings of the Sanguine of whatever kind, are singularly evanescent; and liable to be easily displaced and succeeded by new impressions; as the sunny bosom of a fair lake reflects from every passing Cloud in succession its forms of phantasmagoric beauty, and bright vanishing Splendours.

Persons of this temperament, from their great Nervous susceptibility, are addicted to voluptuous pleasures. Light & inconstant, severe application most generally is intolerable to them, and though often versatile and accomplished, they are seldom accurate and profound

and our Shakespeare has described them with his usual felicity in his Timon of Athens.

Inconstancy and levity are certainly invariable concomitants of this temperament, and variety seems as much a necessity as an enjoyment to its possessor; the Sanguine man, however, is naturally good, generous, feeling impassioned, & delicate, but his affections want intensity.— His goodness renders him ready to serve, but has not at all times the courage to defend. With much of real sincerity he will generally be found to profess more than he performs. and is rather fitted for the companionship of the hour than for the vicissitudes and trials of mortal destiny. In the gay days hilarity and prosperity the sanguine man or woman basks beneath the sunny beam, lively, joyful and extravagant; but you must not be surprised, if you look in vain for this character in the hour of darkness and adversity or if it should grow pale at the prospect, when summoned by duty or affection to walk by your side through the valley of the shadow of death. It has been observed by some writers, that the sanguine is not the temperament in which we should look for the Martyr or the hero but that it requires some other combinations. This may be so, the little opportunity I have had of making observations on those who have been stiled the Heroes of our country, and men under violent persecution, prevents me from giving any thing as conclusive on the point, but in this as in all other things I should suppose

there are exceptions. Sanguine persons, however as far as my Observation has extended, are uniformely courteous, humane, fitted for the gentle Offices of polished life, but not always found capable of steady and lasting friendship. — They are rather amiable than respectable, agreable than consistent.

One remarkable characteristic of this temperament is, the employment of superlatives — the Sanguine judge of persons and things, rather from their own emotions than from their intrinsic worth and character.

Inconstant in every thing, even female charmes, to which they are highly susceptible, exert over them only an evanescent influence.

The diseases peculiar to the sanguine temperaments are for the most part referable to the hearts predominent activity, inflammatory fevers, inflammations, and active hemorrhages &c. will therefore naturally be expected from the great prevalence of this temperament. It is necessary however to observe, that these must be greatly modified by air, climate, habits of living, and a thousand other things or circumstances, which arise out of the condition of civilized life, which modify constitutional tendencies, and consequently, the characters of disease.

It must also be remarked, that exact archetypes, corresponding to these discriptions of the seperate temperaments will rearly, if ever be met with in the World, because they are generally found in combination, mitigating and harmonizing each other. It will be

sufficent if in these delinations of each, prominent Characters are seized and exhibited, so that among the combinations which life is perpetually presenting, we are enabled to recognize the predominating tendencies.— The physiologist here adopts the principle of the Grecian artists, who combined in the Godess of love and beauty, the scattered perfections which he had observed in the finest Women of Greece.

The Choleric though the less amiable, is on the whole the nobler temperament. It is indicated by a darker Complexion, often by a swarthy one; by less exquinte colour, and a harsher skin; by a bolder outline; by more abrupt and angular features, by eyes of a vigorous ardent, and piercing aspect.— In every Choleric face the acute angle will be found greatly predominant over the straight or gently waveing line.

The muscular system, from a cause already explained; is more compressed, rigid and compact; the Muscular activity consequently is greater, and Choleric persons are known by their quick but firm step, and by their generally rapid and impetuous motions.

You look in vain in the Choleric countenance for the soft undulating swell of feature, indicative of the gentle and tender emotions. Choleric persons have in every thing, a Character of vigor and intensity, there susceptibilities, though as easily excited, are more vivid than in the Sanguine, and they are more under the dominion of real feeling, than of the soft

and delicate, but transient illusions of the immagination and fancy.

The Sanguine man, prices the plumage, but some times forgets the dying bird; but the Choleric though he might look with contempt upon the Mock hero expireing in tragedy, would rouse and kindle into indignation at the fate of the real martyr of opression gliding into death through the gloom of his dungeon.— The Choleric temperament indicates a less tender, but more impressive Character, a Character capable of firm and lasting attachments, and of steady pursuits, Ardent imperious fitted for command rather than Obedience, proud irritable, bold, impetuous a Character which when united with commanding intellect is noble in its ambition, fearless in its enterprizes, fitted to grasp and retain the Sphere of the Universe, As the Choleric have more courage, so also have they more integrity, than the Sanguine, who from their timidity not unfrequently exhibit a disposition to equivocation and cunning

The Choleric man dares to think for himself, is more considerate than the Sanguine, and consequently less profligate; his Pride however, will not suffer him to degenerate into meanness. The Choleric is the temperament of mental, rather than of animal excitement, and therefore less addicted to voluptuous pleasures which not unfrequently seduce and eventually vitiify the fine Sanguine Character.

From the great irritability of this temperament and the

vehement and intense Character of its emotions it is liable to affections of that Organ peculiarly under the influence of the mind. i.e. the liver. Choleric persons are therefore generally bilious

The Melancholic temperament evinces itself by a sallow Complexion, by a languid sunken eye – by the hollows of the Countenance by the cold and languid outline – by its large bony features – by its aspect of steadiness, mixed with dejection – by its less active irritability, and compact muscular System – by its drooping form and by its unvarying Character of permanent emotion. When combined with the Choleric temperament, it refines its sensibilities, and sometimes communicates a softer Character of poetic enthusiasm. – This temperament would appear to be essential to genius. Where it prevails, we not unfrequently find, in some porrers of profound research; in other cases, the sublime and tender illusions of the immagination and fancy. – The busts of Locke, of Boyle, of Leibnitz, and of Newton indicate much Melancholy; all engaged in profound Study of Nature, It was the prevailing temperament also of Tasso, Petrarch, and of Rousseau who if they interpreted not the Laws of Nature, adored her sublimities, and followed her footsteps with passionate enthusiasm amidst that solemn and stupendous Scenery, those Melancholy and sacred solitudes where she speaks a Voice so well understood by the mysterious Sympathy of the feeling heart.

To the Choleric Melancholic temperament, almost all the

great men may be traced, the leaders of Mankind, who guide and go-
vern in the arduous Struggles of contending interests and passions.
such men were Alexander, Cæser, Brutus, Mahomet, Charles XII
Cromwell, Buonaparte, and the famous Pope - who slowly travelling
on towards pontificate, stooping, and talking of his approaching
death, for twenty Years, in a moment teared himself and proudly
cried out, I am Pope, petrifying with astonishment those whom
his artifice had deceived. - But, as if Nature studied equality in
the bestowment of her richest gifts, there is in this combination
a strong disposition to insanity.

It leads to accumilations of excitability, which must either
produce morbid impression, or find their vent in great enterprizes.
Melancholic - Choleric Men posess great energy; and strong passions
overstepping the low, grovelling Laws of Necessity, by which the bulk
of Mankind are urged to crawl there little rounds; they are led on
with wild and adventurous strides, to great and bold undertakings,
in the pursuit of power and of fame - linked to their purposes with
strong bands they pursue them, even on the giddy verge of mortal
existence, and through the gathering Shades of death.

As the intellectual Character of this temperament is profound and
acute, so it is not liable to fluctuation of Opinion - Melancholic
persons, therefore, are steady & constant, and in every walk of life
from their stability of Character, are what is usually meant
by respectable - they shock us by no extravagance, and disgust

us by no levities - they are grave and thoughtfull rather prudent and doubtful than buoyant and hopeful. This temperament is almost always mixed with the Choleric which accounts for its high irritabilite, and fervid enthusiasm; alone it would be cold and lifeless

The Phlegmatic is least excitable of all the Temperaments. It appears to be a morbid condition of the Sanguine. It is characterized by a soft, doughy appearance of the whole surface, evidently depending on a want of contractility of the Skin by a colourless and dingy appearance of the latter - by the tendency to obesity and roundness - by its undefined outline and shapeless features - by the animality of its fleshy and ponderous countenance. It has frequently what Medical men call leucophlegmatic appearance. I have in several instances seen this temperament in great perfection. — Its diseases partake of its Character; they are dropsies, effusions, excessive obesity &c The phlegmatic are sensual, without ambition enterprize or courage, inviting by their nerveless Character, the triumphs of the insolent, and the rod of the oppressor.

It is supposed to be the prevailing temperament of the Asiatic Nations, tame, quiet, submissive, but destitute of dignity, energy and power. It enters as a component frequently into the English Character, for we generally find that a very common combination among the English is of the Choleric Phlegmatic. I think it is well suited to blend with the Choleric and Sanguine

to Mitigate their airy and fairy tendencencies, and produce a dis-
position to repose and to the quiet pursuits of intellect

From the Observations I have been able to make upon the
Sanguine Phlegmatic. I am ready to conclude, that it is a good
combination, producing mild and estimable if not highly energetic
and commanding Characters.

From what I have said, my readers would likely suppose,
(and my Observations lead me to conclude the same) that it is
in the blending of all these temperaments that we are to look for
the product of greatness, and recognize those rare and gifted Orga-
nizations, in which are finely commingled the elements of our
Social, Moral, and Active energies, the tempered love of pleasure,
the thirst of Knowledge, and the fire of Ambition

A dissertation
on
Heat.

1820

1820

An inaugural dissertation

for the degree of Doctor of medicine.

On Heat.

Submitted to the examination of the
Right Revd Bishop Kemp Provost,
and to the Professors of the University of
Maryland.

by

Alfred W. H. Elwes
member of the Medical society of Baltimore
and member of the Medical society of Maryland.

Dedicated
to
Richard W Hall. M.D.

D: Sir —

Feelings of the most grateful kind, shall continue to warm my breast, whilst memory recalls to my mind the kind offices which you have done me both privately, and professionally. In your instructions you have ever blended the agreable with the useful, and with a generosity which characterises true philosophy have never withheld the different sources of instruction. The urbanity of your manners, and the extent of your acquirements have distinguished you in the polite and scientific world. That such qualifications may always be attended with success, is the wish of ~~your~~ at one, of your friend & pupil A Clivey

Introduction.

In conformity to the laws of an University, which I shall ever be proud to cherish the following essay on the subject of heat, preparatory to the reception of diplomatic honours is submitted. The subject which I have embraced is among the first in importance to the medical man, as well as to the chymist. Feeling its importance I was led to enter into an investigation of some of its

more sensible operations;— and particularly as it relates to the human system. When I take a retrospect of the great and worthy men, who have so gloriously distinguished themselves; and behold the splendid edifices of human genius;— I cannot but falter as I step fearfully forward towards those margins, from whence commences the uninterrupted, and illimitable rise of intellectual acquirement. Here I might pause;— and by contrast be so deeply penetrated with my own

inferiority, as to give up all farther pursuit.— but when I reflect on the well known liberality, candour, and indulgence, that characterise the Professors of this University, I feel encouraged in pursuing the arduous task.

On Heat.

The author of the Universe, has, with such equal wisdom linked together every part in the chain of creation that it would appear in some measure, to betray a want of philosophy on our parts, to say, that he has created one agent greater than another. "From nature's chain, whatever link you strike, Tenth, or ten thousandth breaks the chain alike."

But it is in ~~hu~~ man nature and consistent with our limited minds, to speak of certain agents as existing paramount to many others. Happy indeed may we consider ourselves in possessing this limited capacity:— for it informs us that we are to remain within certain limits marked out in the plan of providence. Beyond those limits no individual has yet passed; and those who have been presumptuous enough to make the attempt, have soon been obliged to give up their vain efforts and retire within the narrow boundaries of

human reason. Let not the careless reader skim lightly over these moral reflections; and say that it argues a disposition on my part to abridge the noble efforts of mind. But rather penetrate a little deeper into my suggestions and they will at once perceive that they have been governed by the true, and the useful. They will perceive that it is in the disposition of men; and consonant with the views of that being who always has an eye to our welfare, that we should be pleased with what comes more immediately under our senses. They will also perceive that it is the investiga-

tion of such visible and tangible substances, that makes us of most use to ourselves and to our fellow beings.

Being myself impressed with such views, I have in the fulfilment of my collegiate duties, summed up what little energy I may possess in considering the subject of heat. Conscious of the difficulties attending a research ~~into~~ this subject in its various ramifications; I shall endeavour to confine myself to two or three divisions of it ~~—~~ to consider it in as general a way as possible; and particularly as it regards the animal oeconomy. If in the course

of this essay, I should stray a little from the matter immediately in question, or advance any ideas, not in harmony with received opinions — the lenity of that faculty which I highly respect will pass by the imperfections.

It may be proper in the first place to say something of the chymical qualities of heat; — but I shall principally confine myself to its operations on the human system, and endeavour in the sequel to account for certain pulmonary affections, as the consequences of its absence.

The opinions of Lord Bacon respecting the cause of heat, together with

those of his followers — Des-cartes, Newton and Boyle, are so generally rejected at the present day, that to enter into their merits, or demerits would be to impose on your patience. It is well known that they considered it as the effect of an intestine motion in the ~~p~~ minute particles of the body, by which they tend with same rapidity to the circumference, or an expansive undulatory motion by which they incline a little upwards. &c.

Notwithstanding such opinions, the Mysmists were strongly impressed with its materiality, until the experiments of Count Rumford.

This gentleman shook their faith by a number of plausible attempts to prove its imponderability. and

want of gravity. The futility of his arguments, and particularly that which has for its basis, the impossibility of detecting its gravity. If the Count had considered that the weight of a fluid only 1000 times lighter than the atmosphere, cannot be appreciated by our most accurate instruments, he would not have been surprised at the impossibility of detecting so rare a fluid as heat. Might he not have considered, and justly too, then an indefinite series of material substances each a million of times rarer than the preceding, of which, though the weight of the heaviest would be imperceptible by our nicest balances, the lightest might still have been ponderable.

But as the Court has given an experiment in which he declares heat was communicated through a Torricellian vacuum, he has saved us any farther trouble, by refuting himself. Upon the most superficial view of this experiment, it appears manifest, that there could be nothing to communicate, or propagate motion in vacuo. — Hence we might almost conclude, with physical certainty, from this circumstance alone, that heat is material. We have besides this a variety of arguments to prove the converse of the before mentioned propositions, — such as the combination of caloric with water, constituting its fluidity — Its conversion into vapour, enlarging the circle of its combinations

the impossibility of its being formed without the evolution of it: — also its ~~transmission~~ transmission from one body to another — its density corresponding with their capacities and masses: — and the condensation and rarifaction of this fluid in bodies is another among innumerable proofs of its materiality. In the former case the temperature of bodies being increased, and in the latter lowered or cooled. Indeed the present doctrine of heat seems to agree so well with the plan of nature that it would seem like Quixote's fighting against the wind-mills to enter into an elaborate ~~[illegible]~~ discussion to establish it. In an investigation of the most universal operations of nature we generally find

that the more immediate instruments employed for the production of the effects which we perceive, are two contracting powers, by whose cooperation, & mutual counterpoise the necessary equilibrium is preserved. These powers are inertia, and heat. It is well ascertained that without the former, which is the opposer of gravity, or that state in which all bodies are disposed to continue in rectilinear motion — that all the celestial bodies would be heaped together in some part of the immensity of space. Without the latter it is very evident that all the matter of the universe would become congealed, and contracted. Death would be spread over the face of Nature! Neither vegetation, life, nor fluidity

could exist without it. Before quitting the consideration of the nature of heat in general, I might add a quotation from the learned Locke — who observes that when we perceive a number of qualities always existing together, we may gather from thence that there really is some substance which produces those qualities. This observation agrees so well with our notions of elementary heat, that I cannot forbear inserting it. Another argument might be used which would set aside the doctrine of a finite substance producing an infinite degree of heat — and that is, to be consistent they should admit of an infinite degree of expansion. Now, this not being the case, it will appear very

clearly that the arguments of Drs. Black, Erwine, Crawford, and Berkenhout have the preponderance. But again, the manner in which heat is communicated offers another evidence of our position. Take a bar of Iron of considerable length and heat it gradually, beginning at one end. In this experiment, the slow and gradual manner in which the heat passes along, so strangly simulates that regular action of material substances, that we are obliged to give the ideas of vibrations, ultimate motions, corpuscular, and molecular attractions. Having proceeded thus far, and taking the former propositions as granted; it may be proper to speak somewhat

more particularly of this agent.

1st Taking the Sun, then, as the great source of heat, it will be seen that when light proceeds in considerable quantity, diverging as the radii of a circle from its centre, that a proportionate quantity of heat accompanies it. This may be proven by placing a body of an absorbing character within the sphere of action.

From this circumstance, it may not be unphilosophical to say, that light is the ultimate cause of heat:— inasmuch as this is the only action of which our senses can take cognisance.

2d It appears that rays emitted; and passing through transparent media will not heat those media:— unless

such rays be opposed by bodies possessing opacity:— Hence it appears that resistance is another cause of heat:— for it is well known that in proportion as this resistance diminishes, so also, is the heat diminished. Bodies resisting heat are said to have the least capacity for heat, and of course, are the best reflectors. Bodies of the opposite character are said to have the greatest capacity; and absorb heat— being the worst reflectors. Heat has the power of expanding all bodies. This power always having reference to the bulk, dimensions, and density of the bodies acted upon. Heat has been divi-

did by Dr Black principally into two kinds, or rather modes of existance. These are ~~and~~ or sensible heat, and latent or insensible heat. By the first is meant that state in which bodies impart their heat to surrounding substances. — By the second, that state, in which the heat appears to be exerted solely between the combination of material particles.

I have said that bodies were expanded in proportion to their bulks, dementions &c. But to be more explicit, I will also say, that they are expanded in proportion to the latent heat they contain, as well as, ~~to~~ in proportion to the sensible heat added. To illustrate this

in a simple, and easy way, I will cite the experiment made by pouring the spirit of Nitre, more properly Nitric ether, on Snow. The spirit of Nitre contains a given portion of latent heat, as well as sensible: But this latent heat cannot be separated from it, without producing a change on the spirit itself. Deprive it of this portion of heat, and it will no longer be Nitric ether. It may however be deprived of a portion of its sensible heat, and still retain the characteristic properties of Nitrous acid. Pour this upon Snow, and it will be quickly melted by the action of the latent heat contained in the acid.

The snow cannot be melted or converted into water, without imbibing a quantity of latent heat, which it receives from the acid melting it. But the acid cannot part with that heat without decomposition; to prevent which, its sensible heat occupies the place of that which enters the snow and liquifies it. The mixture then becomes exceedingly cold, and the heat forces into it from all the surrounding bodies, so that by the time it has recovered the quantity of sensible heat which was lost, or arrived at the temperature of the surrounding atmosphere, it will contain a considerably larger

quantity of heat, than it originally did; and is therefore observed to be expanded in bulk. Another instance of this expansive power of latent heat, is in the case of steam, which always occupies a much larger space than the substance from which it was produced:— and this whether the temperature is greater or less than the surrounding atmosphere.

I might now enter into a tedious dissertation on the process of congelation, liquification, combustion, evaporation radiation, fusion &c. But as such a display would far exceed the limits of this essay; and deprive me of the time which I wish to devote to the consideration of the operation of heat

on the human system, I shall satisfy myself with a short explanation of congelation, and combustion. After water has been for some time exposed to a cold medium it contracts in bulk: but before it arrives to the freezing point, a portion of heat which is latent, still remains between its particles, which prevents its solidity. At length by the closer approximation of its parts, this heat is forced out. By the discharge a quantity of air is produced; and the ice occupies a larger space than the water did.

The latent heat having escaped, or becoming sensible will for a short time remain about the surface. In a short time it will be dissipated, or communicate

to other bodies. The evolution of this heat accounts for that which is felt by persons on the ice. To convey an idea of the expansive power of water in freezing it may not be irrelevant to mention the experiment of the Florentine Academicians. They procured a brass ball of about an inch in diameter, and after having filled it with water, exposed it to a frigorific mixture of snow and salt. — The water soon became congealed, but the ball was still too thick to admit of bursting. On the third trial the bursting of the ball was accomplished: and when the thickness of the ball, and the tenacity of the metal were considered, it was found that the expansive power of a spherule of water only one inch

in diameter, was sufficient to overcome a resistance of more than 27,000 pounds. A degree of expansion almost double that of the most powerful steam engines; was of course calculated to add much apparent strength to the arguments of those who still plead for the positive agency of cold.

When Dr Black's discovery of latent heat comes in to solve the objections of the resisting party. The Dr. has shewn that water instead of becoming colder, rather becomes warmer upon freezing;— and that the evolution of heat during this process, would have raised water in the liquid state 135 degrees. The appearance of bubbles in the ice, can only be accounted for by supposing an effort on the part of the air, to extricate itself

producing the expansion. But you may ask — what produces this effort on the part of the air? In answer to this query I can only suppose with Dr Black, that the heat released from the freezing water, combines with the unelastic air which suddenly becomes elastic — acquiring an force competent to effect that which has been evinced in the bursting of the brass ball. If this view be correct, the phenomenon must be dependent on heat. The explosion of gun powder is another instance adduced in confirmation of our doctrine. And this brings me to a state of things very different from that of congelation. I allude to combustion. The illus-

tions Lavoisier by his discovery of oxygen gives me an opportunity of satisfying the ~~enquirer~~ inquiries in a very simple and easy way.

Without entering into an enumeration of those substances which are combustible and non combustible, I will take Parke's definition. Combustion says he is a process by which certain substances decompose oxygen gas — absorb its base, and suffer its caloric to escape.

But to render the matter more distinct, a certain portion of oxygen exists in a state of chymical combination in the atmospheric air. The combustible body after being heated to a certain degree absorbs this oxygen from the atmosphere with considerable avidity which becomes fixed in a solid form

To account for the heat, and light which is produced, it is said that these substances which were antecedently employed in retaining the oxygen in a gaseous form; are now in consequence of the decomposition, evolved and given out to the surrounding substances. To give an idea, at once, of the difference between combustible, & non combustible bodies, I will quote Dr. Thomsons illustration. When a stone, or brick, is heated, it undergoes no change ~~exc~~ except an increase of temperature. This stone or brick being left to itself, soon cools; — and is as it was before. With combustible bodies the case is very different. If they be exposed in the open air, and heated to a certain extent, they suddenly become much hotter of themselves, continue intensely hot for a considerable ~~length of~~ time, sending

out a copious stream of caloric and light.
After this emission of heat and light com-
pletely ceases; the body is no longer combus-
tible — having undergone a complete change
and being, as Mr. Lavoisier would say
saturated with oxygen.
Combustion is simply illustrated in
a common fire place. — A stream
of air continually rushes in to supply the
place of the preceding decomposed air
until the whole of the fuel is decompo-
sed. The smoke which arises in a
common fire ~~place~~ is chiefly water in
a state of vapour: — with a mixture
also of carburetted hydrogen gas, and
bituminous substances. A part of the
water comes from the moisture of the
fuel; the other part is formed during
the burning, by a combination of the

hydrogen of the combustible, with the oxygen of the atmosphere. It is probable also that the Nitrogen of the atmosphere, combines with a portion of the caloric of the oxygen, forming rarified nitrogen gas. Combustion has been considered by the chymists as a double decomposition. This double elective affinity is accurately displayed by the learned Dr Crichton, that it will far exceed any explanation given by myself. The component parts of oxygen says the Dr which is furnished by the supporters of combustion are two;- oxygen and caloric. The component parts of all combustibles are likewise two;- viz. the base, and light. If the two first are called No 1 and 2, and the two latter No 3 and 4 — the product of

the combustion will be formed by No 1 and 3, and the compound which we call fire, will arise, from the combination of No 2 and 4.

Having thus disposed of congestion and combustion, In a short, but I hope correct manner, I am now at liberty to enter into an investigation of the second important division of this essay.

Excessive heat, and excessive cold are commonly considered as equally inimical to the human constitution. It requires but little observation to perceive the error of this broad proposition, when we take a review of what are called the diseases of warm climates. Those who have

read the writings of Lind, met with the observations of Pringle's diseases of the army — or Dr Moseley's account of West-indian diseases, will clearly anticipate what I am about to advance. When the system has been exposed to the action of an intensely hot Sun, or in other words to a temperature of above 86 a degree of indirect debility is induced, which makes it extremely obnoxious, to that damp, and cool atmosphere which follows the vivid Sunshine of a tropical climate. Evaporation through the day, has been so considerable as to expend the resisting energies of the system. The individual sits panting for breath, and gasts

the approach of every succeeding breeze. Total indulgence! — which whilst it comforts for a short time, is probably only an allurement to the grave. The excitement having by this time taken rather a centrifugal direction dispossessing the cuticle of that excitement proper to its functions, renders the system susceptible to our common enemy cold. This cold soon seizes on the defenseless organs, and by condensing that perspiration which remained on the surface, in consequence of an incapacity of the absorbents, abstracts the little remaining excitement so fast as to produce a chill — the consequent reaction produces a fever which runs its regular course: —

and when the proper quantity of marsh effluvia is present, soon prostrates our patient, evincing all those symptoms which we denominate bilious, or yellow fever. Hence Dr Moseley's observation that the diseases of warm climates might properly be said to arise from cold. I will go a little farther, and say, with due deference to that highly respected faculty; that heat in the abstract never produced any, in the medical acceptation of the word. But it is whispered to me, that the Coup de Soleil, commonly called a stroke of the Sun, occurs without a chill, or rather without the concomitant cold. This may at first view appear an invincible argu-

ment in opposition to me. If we investigate the matter a little farther the weight of reason may possibly preponderate against our opposers. In the first place I would ask what is a stroke of the Sun — unless it be apoplexy? If it be apoplexy, which I believe is generally admitted, it becomes us in the next place, to trace the manner of its occurence.

The intense rays of the Sun acting on a person already predisposed, by its debilitating effects, produces such a determination of blood to the brain as to overwhelm the enfeebled vessels. These debilitated vessels are ruptured, effusion of blood takes place; the nervous energy, or that prime director

of health that excitement is interrupted, and the unfortunate being falls a victim to cerebral congestion. Now it is plain that all this could not have happened without debility in the vessels of the brain:— and what is the material difference between debility in a certain sense of the word, and chilliness, or that sensation produced by cold. For both instances are not the vital powers brought down? Is not the chilliness a mere effect of debility? To illustrate my idea & make it more evident, I will suppose that state of things which takes place in fright. In the hottest months a person becoming suddenly

and powerfully impressed with fear, will absolutely tremble — the extremities and the surface will be cold, producing also a considerable shrinking. — If the first attack of the fright, and the reaction were in quick succession, or the patient seized with apoplexy — which might be the case; there would not be seen the usual marks of chillness. — Hence I might conclude; — if chillness is a mere consequence of debility; and if disease cannot take place without debility; that there is such a close alliance between the two — that philosophically speaking they amount to the same, so far at least as they seem to explain the preceding

phenomena. Another instance explanatory of my views is in the case of a person, who, for the first time rises to address an audience. If the novice, be a modest man, he will from the novelty of his situation, be seized with so great a fear, of not acquitting himself properly; that the blood will suddenly quit his extremities mounting rapidly to his perturbated brain. Then the chill is evident.— But if he had been considerably predisposed to apoplexy, and the repletion of the blood vessels had been no more sudden than before, no chill would be perceptible.— Yet reasoning a priori a chill, or something equivalent must have existed. From what

Shaw said it would appear, that although heat may be admitted as the remote cause of disease; yet that cold should always be considered as the more immediate. This appears to agree so well with the observations of different writers, and with analogy that I cannot see how it can be overweighed against. The experiments of Dr Fordyce, Sir Charles Blagden Solander, and Dalton, prove that the human body by its own intrinsic powers, can resist for some time the a temperature of 260 degrees — that is, 162 degrees higher than the average temperature of the human body, which is from 96 to 98. How striking

there is the difference between the operation of heat, and cold on the human system. We perceive very plainly from the foregoing experiment, that the system can adapt itself to a much greater degree of heat than cold. Were the thermometer to rise, for instance, in the course of two days from this time to the 200th degree there is very little doubt as to our being able to bear it. The only inconvenience attending would be probably a considerable loss of strength and volume.

On the other hand were the thermometer to fall in the same space of time, and in the same proportion; taking 98 as blood heat, the vital spark would

certainly be extinguished; unless we approached the fire, or drew ourselves by clothing. Sir John Pringle has observed that in all the campaigns in which he served, notwithstanding long continued heat, that the troops always preserved their health, until fags, or rains came on — or the army was cantoned on marshy ground.

The fatal epidemic which prevailed after the battle of Dettingen in the year 1743 and in 1747, are instances in point. The observations of Pringle are too generally admitted to render it necessary for me to consider them more particularly. In proof

of his observations on remitting bilious fever we have only to turn our attention to the fact, that cold condenses the miasmatic vapour.

Gentlemen who visited Fells point last summer have frequently observed that the yellow fever, assumed a much more malignant character, on days when the heat was diminished.

When I spoke of heat as a chymical agent, I believe I observed, that one of its principal characters, was that of expanding bodies. This law of heat being so generally known, it might appear almost superfluous, were I to enter particularly into its

modus operandi on marsh effluvia. Suffice it to say, that heat by placing at a greater distance the deleterious particles existing in the effluvia, or marsh exhalations renders them more innocuous, and diminishes the quantum of poison inhaled. It is now time for me to defend my former proposition that heat in the abstract, will not produce disease. From what I have already said, it appears that all fevers are preceded by a chill, or something equivalent. For the sake of perspicuity I will take Dr Wilson's manner of dividing the circulation; and again repeat some of my preceding observations.

For the easy elucidation of the occurrence of fever, Dr Wilson supposes two circulations — the circulation of the centre, and that of the circumference. By a common law of Nature when the circulation of the circumference is suddenly diminished by the application of cold the returning blood, clogs with the circulation of the centre — a chill takes place, and the reaction succeeding it, is nothing more than an effort on the part of Nature to relieve herself from this irregularity and adjust the lost equilibrium.

It is obvious then that cold in itself has the power of producing a fever — But from the little knowledge I profess

of the operations of the human sys-
tem, I cannot agree, that heat in it-
self will produce a regular fever.
Take a person for example and ex-
pose him to a temperature of 300
degrees; and mark the consequences.
From the power which the system
has of resisting heat, the pulse for
some minutes would scarcely be
increased, or the respiration hurried.
By placing the ball of a thermometer
in the mouth of a patient, the tem-
perature of the body, would stand
nearly at, or about 98. Some time
afterwards the pulse would be increased
but at length the quantity of evapo-
ration would expend the switch

energies so much, that the power of the heart, would begin to fail:— the pulse would be very frequent and small for a while — the system sinking more and more, the heated atmosphere ~~gain~~ would gain the ascendency, disarming the system completely of her vital resources.— But you may say that there is a fallacy in all this — for that an inferior degree of heat continued for some days weeks, or months, would produce disease. I grant it. But during this continuance of heat; are there not pernicious exhalations evolved from the earth? Does not the dampness of the night, even in our warmest

weather exist? The dew falling sometimes in large quantities, while the skin spreads its surface to every accession of cold. Nat to mention the quantity of cold water taken in the form of beverage, which by accumulating the quantity of excitement, and abstracting it from the circumference, gives the cold air a better opportunity for accomplishing its unfriendly purposes. If all these considerations with some others which I might mention were excluded, and we should suppose a person insulated in an atmosphere either at, or for exceeding our summer temperature I cannot think that any

regular form of disease would be produced. At all events so long as the heat generated by the system was sufficient to meet the expenditure, made by perspiration. As soon as the vital powers failed, the perspiration thrown out on the surface, being disproportionate to heat making power of the system, would from an incapacity of the absorbents remain on the surface simulating the perspiration which precedes death. This would rob the system so fast of the remaining heat as to produce a chill:— and as little power would be left for reaction, we should have something, perhaps of a Cholera, a diarrhea, or a

Nervous fever — or in the language of Brown disease with exhausted excitement. Here I flatter myself, that I have again illustrated the position — that cold is the immediate cause of disease. — Again — the case of a burn is completely illustrative of what I have already advanced. The very first application made by a physician to a patient, who has been severely burned, is completely conclusive in favour of my hypothesis. This application consists in a quantity of cotton spread about the patients surface; which by its non-conducting quality, prevents

the escape of the animal heat.—
Hence it is that the patient, is con-
sidered as in the most immediate
danger; if the shock produced on the
nervous system should have been so
great as to prevent reaction. The
philosophy of the case is plain.
To be brief in my explanation of
it, I might say with propriety that
in this case there is a contention
for the superiority between the laws
of life and the laws of chemistry.

Having explained my proposition
that heat in the abstract, will not
produce a regular disease, I might
now ~~the~~ to prove that cold will

cite the whole train of Pneumonic affections. A catarrh, or a Pleurisy will sufficiently develope the fact. What is pleurisy in reality, but an irruption of the usual excitement of the system; with a diminution of healthful excitability. A person of robust constitution exposes himself to the cold after having a warm room — his lungs being previously debilitated receive a quantity of blood much greater than usual. "The pulmonary veins associate themselves with the languor of the surface, which lets a few strokes of the heart, and pulmonary arteries so overwhelm the languid absorbtion of the pulmonary veins, that an engorgement of the capillary

branches, necessarily ensues. It is this engorgement that produces a chill, by the locking up of the excitement:— and what is this chill but a deficiency of animal heat?— and what does this deficiency of heat arise from, but from a deficient quantity of excitement— And is not this excitement deficient in consequence of a collapse of the vessels of the surface cooperating with an engorgement of the pulmonary veins. If these interrogatories arise from a proper view of the subject, I think I may with assurance say, that cold was the first sensible and immediate cause of all this mischief:— produc

cing, evidently a regular disease. I might take the opportunity before I enter into an explanation of my views as respects the cause Phthisis Pul.— mention the manner in which catarrh takes place:— and show that what is commonly called taking cold, is perhaps one of the most appropriate expressions, or denominations of this disease called technically Catarrh. For common sense the standard of true philosophy has by common consent shewn that it is to cold we are to attribute it. The inflammation does not confine itself to the mucous membrane of the branchiae but frequently extends to the brain, or to the lungs.

The principles before laid down will equally apply to the explanation of the phenomena exhibited in this disease.

It is now time to revise the question which occurred to me in the plan of my thesis.— Why does Phthisis Pulmonalis exist so frequently in cold climates and scarcely at all in warm ones? Some may think it presumptuous in me to attempt to account for what has been thought inexplicable — But as I conceived certain ideas on this subject and have promised to make them known, I will with every degree of respect for those who differ from me, and with a consciousness of the difficulties attendant on such an investigation make the attempt. Cold is that agent with—

without which, it appears to me Phthisis Pulmonalis, or consumption would never happen. As the inhabitants of warm climates scarcely ever have the disease, it proves that cold to produce its ill tendencies in that way must in the general be applied in a certain quantity and for a considerable length of time. The inhabitants for instance of Martinique are in consequence of changes which take place even in that warm climate subject to Catarrhs; and sometimes to pleurisy; rarely to the latter. Now the reason why Phthisis does not take place is evident. The change of the temperature from hot to cold is not great enough. The heat of the system is still in sufficient quantity, to prevent the cold from taking entire possession

of the surface. The hot atmosphere soon returns the equilibrium which was lost, only in part and a free perspiration probably ends the disease. In a cold climate a very different state of things exists. A person exposed for a long time to the agency of cold, is continually in danger of a violent pulmonary affection. The cold to which he has long been exposed, is continually seeking an opportunity to seize upon the surface when it is least defended by the proper quantity of excitement. It is true that the system forms heat for herself in proportion to her demands:— but if the cold should continue to rob her of her heat for too great a length of time, she would at last be obliged to yield;—and give herself over to

disease — and perhaps death. According to the experiments of Crawford the increased quantity of carbonic acid, formed at the lungs, in cold climates proved that more oxygen was made use of. Admit it. So long then as the proportions between the carbonic acid and the oxygen agreed nothing could happen. The system finding herself giving way makes demands for oxygen, with which she is not supplied; and the consequence is that the carbonic acid is in an increased ratio. "The circulation in the pulmonary veins associates itself with the languid surface; whilst the pulmonary arteries, still act with

considerable force — producing the engorgement, and hemoptysis. When I said the formed heat in proportion to her demands, it will be recollected that I alluded to the healthful state: and of course comes more under the definition of ~~disease~~ health than disease. Let us then say, that the system in a state of health forms a certain portion of heat, or, to be more definite, that the heat which is taken into the ~~system~~ lungs in a latent state, with the oxygen of the atmosphere is evolved, being quickly received by the blood before it has time to injure the lungs — according to the much esteemed theory of our highly

respected professor of Chymistry Dr. Debutts.
Should this process be interrupt by a
diseased one, what would be the conse-
quences? — Several things would take
place which appears to me explanatory
enough:— but that I may not be
misunderstood, I shall again make
an illustration. Suppose then that
a person is seized with a chill — and
trace the consequences. The contriction
of the surface prevents the usual quan-
tum of heat from passing off by perspi-
ration:— but the blood is still receiv-
ing the heat imparted to it at the lungs
by the decomposition of oxygen. If
it should be said that during the

still not as much oxygen is used; I would then suppose a case, where there was a simple retention, of the common perspiration without a chill — which might happen. — In this case what then would become of that portion of heat which before passed away by sensible, and insensible perspiration? This heat, I have reason to believe becoming morbid, and being confined by the inactive cuticle, would go to the lungs in preference to any other part. — The latent heat would still be evolved at the lungs, whilst the capacity for heat in the blood, would be diminished; — which

diminution would at least, be greater in proportion to the heat evolved.

Several ill consequences would flow from this state of things.

1st The accumulation of morbid heat although it would increase the diseased action, would so much diminish the healthful action in the process of oxygenation, that a part of that heat evolved at the lungs; and which before was quickly received by the increased capacity of the blood, would now in consequence of its diminished capacity, be retained about the lungs.

2nd This same accumulation by weakening the vis vitæ, would impair the assimilating powers of

the System.

3dly In the same proportion as the morbid heat increased; - in the same proportion also, would the possibility of evaporation be prevented.

4th The ~~evaporation~~ exhalation at the lungs, so necessary for their preservation would be interrupted. This would be another unfavourable circumstance. The blood returning to the lungs, instead of having lost heat, as in a healthful state, would arrive there surcharged with morbid heat; and the heat again evolved by the decomposition of atmospheric air, would serve to extend, or rather increase, the morbid heat. Hence

also, as the morbid movements continued to increase, every portion of cold air inspired would tend to increase the malady in two ways.

1st The oxygen taken in, which under ordinary circumstances, was indispensibly necessary, would now in itself, become a source of injury and irritation:— just in the same manner that the common atmospheric air irritates when there is an abrasion of the cuticle — giving rise to this common saying:— Such a person is now afflicted with a considerable sore, in consequence of having taken cold in a very trifling wound.

2nd The cold air inhaled would from its well known sedative properties, would accumulate the excitability; and in proportion as this morbid excitability would be accumulated; in the same proportion would every subsequent draught of cold air increase it, to a certain extent. This circumstance is completely illustrated by the following fact. A person, for instance, in a very cold day feels thirsty; and in vain attempts to satiate that thirst by drinking cold water. The more he drinks the more his disposition to drink increases. The reason is plain — In propor-

tion to the cold made use of, the excitability increases, and in proportion as this excitability increases, in the same ratio, he demands more water. — If he have no local disposition to disease, the increased excitement, will by a great effort of nature find its way out by perspiration, which will continue for some time, and that probably in proportion ~~to the~~ liquid drank. When this thirst first commenced, instead of resorting to cold water, had our patient made use of a single tea cup-full of hot, what I have before discribed, would not have existed.

Its stimulating properties would, particularly when mixed with a little alcohol, have restored that mucous secretion of the mouth, and fauces — the want of which produces thirst. again — It ~~appears~~ is very probable that the non conducting character of the lungs, which, in a state of health appears to be a happy provision of nature, would now be calculated to assist very materially in producing all that we would wish to avoid — A retention of morbid heat at the lungs: It is a law in chymistry that bodies

of a soft, and spongy nature are bad conductors of heat. The lungs are precisely of this character:- and the more they would be surrounded by morbid heat, the less would they be disposed to assume what little conducting powers they possess.

It may be objected to this, that I make use of chymical phenomena to explain those of life. In answer to this objection I am confident in saying, that in proportion as the healthful laws are deminished, that those of chymistry continue to increase, until in death they reign triumphantly.

In cold climates vegetation is undoubtedly

of a deep, and strongly rooted sense of sin. All being conscious of their demerit: and it were they were in danger of being punished for it, they would endeavour to avoid it, and consequently pursue the opposite.

It may be objected to this, that experience of corporeal punishment to men does not always. In answer to this objection I am convinced, that in proportion as the rational faculties are cultivated, that fear of punishing contributes to give weakness, until at death they begin to be insensible.

In order this objection in an absolute

more prompt, and vigorous than in warm. The fields more suddenly spread their green surfaces to the view! The forests rise with more vigour, and majesty! In a shorter time, the garden unfolds its flowers — shedding a more delightful fragrance!

This difference in vegetation is supposed to be owing to the sudden increment of heat — to the greater warmth of the earth, whilst the air is colder.

It would appear, as if nature, whilst she distributed greater life to the inhabitants of the North, also made them more subject to violent, and fatal diseases: — and as it were, by way

of equalizing the scale of justice, causes those to suffer most, who enjoy most. Man is never stationary. From the time he breaths the first portion of vital air, he continues to grow, and flourish, until he may be said to have arrived at his acme. But as this period cannot be ascertained, we usually say that he remains in his full vigour, in cold climates, such for instance as Connecticut, until about the age of between 45 and 50. It is then that he may be said to take a decisive step towards the grave. Now, it is notorious that

persons are more apt to be seized with Phthisis, or at least with a predisposition to it, when they are just wavering between the acme of health, and the first decent towards disease. To some it may appear paradoxical to say that a person is most liable to disease when they possess the greatest stock of life. But it is nevertheless a fact, and to me it appears perfectly consistent with philosophy.

A man living in a cold climate possessing a large quantity of heat, and he requires more of this friendly agent to defend him from the cold

is of course cautious to not expend his vital stock too freely by perspiration. He possesses more latent heat than persons in warm climates; and this necessarily. But this very heat which has so long been his friend, like any other parasite diminishes, in the course of time, his vital stock producing indirect debility. The moment this debility exists to a certain degree, cold has an opportunity of seizing on the surface: and the lungs are affected in preference — for this reason — that as they were obliged to make more heat to defend the

system against the increased cold — the very exertion so long continued and increased for the production of such heat, now brings on a debility in these parts which predisposes them to Phthisis. — or in other words the pulmonary vessels being weakened in consequence of the oxygenating process, which was so long increased to meet the increased demands of the system, become at last victims to that agency which before preserved them. If then these vessels become thus exhausted, or become

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asthenic, from the principles already laid down Phthisis. is easily accounted for.

It has been observed that this disease is most apt to attack those of a sanguinious temperament; possessing great excitability. Before I speak of the narrow chest, long neck &c. I may take notice of an observation made by an intelligent friend, who for want of better terms, asked when conversing on this subject, whether persons did not live too fast, who subsequently became

Phthisical

accounted for.

It has been observed that this chicken is most apt to attack them of a dun or mouse colour, whenever it happens to be at liberty. When it has killed the hen which has produced it, from this motive of our Maker, we also by our intelligent reason are, made for ever of further trouble, either when commencing on this knowledge, that the hawkers did not know too, but make knowing by experience

This in reality is the case. — For persons possessing a great degree of excitability wasting both by mental and corporeal action their very substance, If I may be indulged with the expression, are obliged to make such large demands on the sensorium of life, that by a greater and more rapid consumption of it, a debility is the consequence which lays the foundation of disease.

Persons who have a narrow, and elongated thorax are said to be most subject to Phthisis. This is true: — and can be explained upon these principles

A person thus constituted has generally had a very rapid growth. When the rapidity of such growth takes place to a certain extent, it becomes in some measure unnatural:— and as the capacity of the arteries, would not as in ordinary cases, be in proportion to the volume of the blood, it is consistent to infer to that some part would give way in preference to another. From what I have already said of the effects of cold; and by considering the extreme delicacy of the pulmonary vessels, it

may not be revolting to philosophical correctness, to say, that they would be disease in preference. Analogy has furnished me with another circumstance, which appears to be an adjuvant to a correct explanation. It is this. A man with a narrow thorax, and small lungs, inhales the nitrous oxide, or exhilarating gas. He has no sooner taken the common quantity, than he exhibits a degree of excitement, which as may be his disposition, makes him either

[illegible]

frantic, and ungovernable, or gay & frolicksome. Another with a large thorax, and capacious lungs inhales the same quantity, or even half as much more, which certainly more than compensates for his inferior pulmonary capacity;- and he is only pleasantly excited. There must be some reason for this.

From this kind of analogy I may suppose, and probably with a degree of reason, that the quantity of oxygen inspired by a person with a narrow thorax and lungs of small

capacity, is more than in a ratio necessary to the subsistance of that person — and therefore injurious. The cold which accumulates the excitability, increases the thirst for oxygen; just as the ~~excitability~~ excitement before alluded to increased the thirst for water — Hence accumulated excitement takes place, ~~at~~ ~~pretty~~ much in the manner before discribed, which in all probability fixes the disease — unless by an effort of nature, or timely medical aid, that excitement be distributed

to the surface. To show how great an affinity the lungs have for cold, I will mention a very remarkable circumstance mentioned in the lectures of respected professor Dr Potter. He mentions the case of a woman who had long laboured under a pulmonary affection. As soon as she left the country and exposed herself where marsh effluvia abounded, she was seized with an intermittent which absolutely suspended the pulmonary affection. As soon

[illegible] the Long [illegible]. So there has
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for sale, I will mention a few
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in the Letters of Judge [illegible]
Mr Potter. He mentions the
[illegible] of a man who has lost long
[illegible] under a [illegible] on the
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has [illegible] with an [illegible]
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as she returned to her former elevated situation in the Country — the intermittent subsided and the former affection again preponderated. From this the Dr took occasion to observe that the lungs appear to have a specific attraction for cold; just as the liver has for marsh effluvium.

Having thus accomplished the plan of this essay, in the best manner I was capable, I might now ~~enter into~~ make the applica

tion of my theory — pointing out the proper prophylactic plan and also make some observations on the best manner of removing the predisposition to Phthisis Pulmonalis: but for want of time I shall be obliged to conclude.

The generous sentiments, of the distinguished faculty, to whom I submit this essay; will make a proper allowance for any inaccuracies that may appear, in the consideration of a subject so difficult, an extension, as that of heat.

1820

An Inaugural Disquisition On Tetanus

Submitted to an Examination before the Right Revd, James Kemp Provost The Regents and Medical Faculty of the University of Maryland For the Degree of Doctor of Medicine by

Henry Haw of the District of Columbia.

To

The Memory of John T. Shaaff. M.D.

Conspicuous on account of his Medical Skill

Acumen of Understanding

Elegancy of Manners

and every other gift of an honest mind

and to whom bound by many favours,

the Author dedicates this attempt,

feeble as it is, as a testimony

of sincere affection and regard —

To

John B. Davidge A. M. M. D.

As a testimony of a high esteem
for his Medical reputation,
Amiability of disposition,
and many marks of attention
received from him; This tribute
of Respect, humble as it is, is re-
-spectfully dedicated by his
affectionate friend, and Pupil

Hy. Hawes

Introduction.

If the production of a Thesis were a matter of choice, there would be some necessity that a young beginner should attempt to excuse him=self for such an effort; as it is a duty en=joined, and not left to the writers Option he is saved all trouble of Apologizing and may perform as well as his opportunities and abilities allow, the allotted task. —

The author has made choice of a disease for the subject of this Dissera=tion, the treatment of which he confesses himself unable to improve, yet this does not occasion much uneasiness while accompanied

Introduction.

~~[illegible]~~ by the reflection that much improvement in the treatment of diseases cannot be expected from one who is but just crossing the threshhold of the Temple of Appollo, and who at best can only be supposed to know something of the experience and opinions of other Men. —

The Tetanus is of all diseases best suited to exercise the feelings powerfully and awaken all the sensibilities of the Soul; It is often produced by causes ~~th~~which at first view are slight and trifling and generally bids defiance to the ablest efforts of the Physician. —

Introduction.

It is his sad fortune to behold a fellow creature wreathing under accumulated agonies, occasioned by the morbid action of Instruments which in health perform all the useful and pleasing movements of the body. He is frequently obliged to witness the agony of the sufferer, the distress of the relatives and the certainty of death increase with the continuance of the disease. In spite of all his skill and judgement, he is forced to confess the mysteriousness of the connection existing between the nervous and muscular system, the too frequent incompetency of art to relieve the sufferings of nature; what then?? are we to despair because now ignorant to

Introduction.

to suppose that the treatment of this awful malady may not hereafter be properly discovered and di=
=vulged, to liquish hope because fruition is not, yet, would be as improper and unmanly as to forget the manner in which all know=
=ledge has been laid open, or to neglect the use of means which scientifick investigation has prepared for our service on other occasions. —

It is fortunate for human life that many dreadful and incurable diseases are by no means the most common; like the most ferocious or venomous of the inferior ani=
=mals their incursions are comparatively few, though most to be dreaded; still they are

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are sufficiently common to demand our attention and render it necessary for us to acquire as much as can be known of their natures and history. He who knows all that is known on any subject and is unable to afford relief may be excused, but the negligent can=not hope to escape without the censures of the world or the reprehensions of his own conscience. —

On Tetanus.

The causes which occasion this Dis=
=ease are, as has been hinted, very trifling when compared with the magnitude of the evil that ensues. The most common of these causes are the accidental Wounds produced by the puncture of some part of the body, more especially of Nervous or tendinous parts, with some rough substance as an old nail, bit of glass, earthen-ware, or bone.

The injury occasioned by the tearing or crushing of a limb by Machinery, the laceration attendant on Gun-shot wounds, and Compound Fractures, are also the causes of Tetanus. Not un=
=frequently this dreadful evil renders all the best

On Tetanus

best attempts of Surgery nugatory; Operations are per=formed, Wounds dressed, and all seemes to promise a favourable termination; when the attendant perceives the approach of Tetanus, and a few hourses of torture frees the patient at once of pain and existence. —

Next to these the most frequent ex=citer of Tetanus is improper exposure to the incle=mencies of the Weather — This is most common in Warm and sultry Countries where persons who are exhausted and overcome by the exertions of the day are tempted to enjoy the refreshing coolness of the Evening; in this situation, Sleep surprizes them, and they remain all night

On Tetanus.

night exposed to the chilling influence of the air and Dew; The consequence is a speedy appearance of Tetanus in a greater or less degree and too often it results in death. - In such Countries the incite=ments to intemperance are great and the means of gratifying this propensity are easily attained. — Hence not a few of the Cases which are brought on by exposure, occur in persons who are rendered still more liable to the disease by antecedent debauch.

Symptoms.

The first premonition of the disease is generally a Stiffness of the muscles of the Back

On Tetanus.

Back of the Neck, followed by a general soreness & immobility of all the Muscles. The pain is felt ~~the~~ under the Sternum and also at the root of the Tongue. The progress of Tetanus is unattended by Fever; it shews no symptom which would lead to any idea of the horrible extent to which it may advance. By degrees the pain at the Sternum increases, the stiffness of the Muscles becomes more general and the Jaws are drawn violently and firmly together. The Muscles of the Trunk, of the Arms, and Legs soon yield to the morbid action.—
The violent contraction of the Muscles of the Back, and Abdomen, at the same moment stiffens the Body; the hands are vehemently clenched,

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clenched, and the legs powerfully extended.

In proportion to the affection of the muscles of the Throat is the difficulty of Speech and swallowing fluids placed in the mouth violently ejected through the Nose, the sudden and Spasmodick actions of the muscles of Deglutition. - The Abdomen of a patient under these circumstances seemes as hard as a Plank; The Bowels are obstinately costive, and we have every reason to believe that the Spasmodick action extends to the muscular fibres of the Intestines themselves.

In proportion as the one or other set of muscles is most powerfull, the body is

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is bent that way; This bending is most generally backward, as the Muscles which sustain the body are the most powerful, and the body is vi=olently pulled backward as to form an Arch the patient resting on the Head and Feet alone; The Organs of voluntary motion, are all dreadfully affected, The Eyes are fixed immove=ably in their sockets, the Countenance becomes hideously distorted and express at the same time the greatest degree of distress. —

The violence of the symptoms sometimes re=mit for a few moments, but are reiterated with equal force when the slightest motion

On Tetanus.

motion is attempted. If a favourable issue may be prognosticated in any of the forms of Tetanus, it is that in which the disease is occasioned by exposure to the Weather.

Where the disease is excited by laceration, puncture, or wound they are certainly in al=most all cases fatal; In some instances the disease is terminated in four days and some=times is protracted to a fortnight.

Doctr. Parry of Bath has made a remark which if correct is certainly a valuable one, that is, should the pulse of the Patient not exceed or reach to 100, or 120 beats in a minute,

On Tetanus. -

minute, by the fourth or fifth day, the Patient almost always recovers. should the pulse on the first day equal this the event he says is al= =ways fatal. -

Treatment. -

The first attention, should be given to the condition of the Wound, puncture, or la= =ceration, if the disease be caused in this way. - It is not, uncommon that the part originally injured is cicatrized or nearly healed up when the Symptoms of Tetanus supervene and one instance is recorded where the reopening & irritation of the part injured has succeeded.

succeeded in preventing the advance of the disease

The effects of Compound Fractures are as before observed, the occasion of Tetanus, and indeed in Warm Weather and in circumstances not altogether favourable. — A Surgeon should be cautious how he neglects the immediate performance of Amputation. —

Where we design to irritate and inflame the part which has been injured, it may be done by means of the application of the Oil of Turpentine; the Blistering Ointment or some other stimulating agent —

These dressings should be frequently changed

On Tetanus.-

changed until Suppuration is perfectly estab-
-lished.- Lunar Caustic or what is better
the Caustic composed of the Alkali and
Quicklime should be applied in preference
to every thing else.- When there is any reason
to suppose a nerve to be partly divided; if
it can be done without dividing great Blood-
-vessels it should be freely divided by the Knife.-

As an internal remedy none seems
to promise so much as Opium, although
other remedies are mentioned which are
worthy of attention, Yet Opium is to be admini-
-tered in Tetanus, without referring to anything

On Tetanus.

anything but its effects; We must begin with it in large Doses and continue them until the System is influenced by it; The effect must be kept up and the Dose repeated whenever the System appears to escape from the first -

In that variety occasioned by exposure; the most effectual treatment is the use of the Cold Bath every two hours, and an Opiate draught proportioned to the violence of the Symptoms

Drs. Rush and Hosack, have related in the Medical Repository, Cases which were effectually relieved by the use of the Madeira Wine alone. -

On Tetanus. –

In cases where the symptoms of the Disease, begin to manifest themselves, immediate Amputation has been proposed, and I know not but this method is preferable to running the risk of loosing the Patient without attempting to save him? —

An

Inaugural Dissertation

on

Scrofula.

For

The Degree

of

Doctor of Medicine

Submitted to the Examination

of The, Right Rev.d James Kemp D.D.

Provost, and the, Professors

and

Faculty of Medicine

of the

University of Maryland

by

John. T. P. Yeargain

member of the maryland & Baltimore medical societies

member of the New York medical & chirurgical

Society, and honorary member of the Dialectic society

of the University of North Carolina

To the —

Learned Professors and Faculty of Medecine of the University of Maryland.

Feeling no partiality for any particular Professor, and being equally impressed with the Talents, and Erudition of each, in his respective department, allow me on this occasion to give you some faint idea of the emotions, of gratitude, I now feel, towards the Institution, of which you are the organs, and shall ever cherish as my alma mater — for the pleasure, and improvement, derived from your respective lectures.

By addressing to you this very imperfect Essay with the most profound regard of the author.

Medical science more perhaps than any other, admits of speculation and this immense field seems to enlarge in proportion to its advancement towards perfection, for the science is abundantly more learned now than it was twenty years ago, and instead of resolving itself into a given number of laws, seems to expand always, beyond our reach, reflecting different portions of its lumen, according to the density of the medium, in which it may be evolved

Scientific men are now less concedant on any one speculative subject, than they were anciently, whether this be the natural pride of the human soul, fond of its own plumes, or a laudable desire to deminish, the impending strata of human ills, we cannot determine, but both of these are indispensible to the advancement of usefull knowledge, for there is no greater obstacle to the rays of science, than a bigoted devotion to antiquity, or superstitious fear of innovation.

An honest spirit of inquiry rather than a consciousness of abilities, capable of doing the subject Justice, or myself credit, has led me to

to the choice, of one of the greatest enigmas of medical science, for the subject of my inaugurating Thesis. I shall offer no apology for intruding myself into the presence of those learned men who have treated on the same subject, when I reflect on the obligation that every son of science is under to attack error in what ever company it is found, I am not promising any thing new, but shall try to shew that all that has been said on the subject is not correct

Scrofula

Is a disease in our opinion, the whole appearance of which, has not been accounted for, This Ignis Fatuus of our art, has successively conducted, the accurate, Morton and, Fothergil, the learned Hunter and Burns, through the fens, and bogs, that surround it, while its true nature has remained, the same mysterious and inexplicable. The pride of science can illy admit so palpable an infringment It behoves us to account for all morbid action, in the living system — there can be no effect without a cause

It is a disease of the whole system exhibiting certain phenomena, whether situated in the thyroid gland, Lungs, or bursa mucosae of the knee joint, mesentery, or glands of the neck, but shewing itself

itself more evidently in the extreme vessels, or in parts most remote from the seat of circulation, depending primarily on a disability of the whole arterial system.

The short time allowed me for the completion of this duty, from the late hour of my examination, and the near approach of the period when it should be handed in, will compell me merely to abridge the general subject, and only particularize, one of its family.

Scrofula

Is derived from the word scrofa, a hog, or small swine from that animals being particularly obnoxious to tumefied glands, called also Struma from its being seated in the absorbent glands of the body, also called Kings evil, from Kings having attempted to cure it by the touch.

Doctor Cullen places this in his Class cachexia and order impetigines, he has four species, but as we conceive the disease the same in what ever part of the body located, we shall not detail them. The Doctor defines scrofula, tumors of the conglobate glands, tending slowly to a suppuration.

Authors claim the following marks indicative of a scrofulous habit — a softness and flaccidity of muscular fibre — skin smooth transparent — the eyes are generally blue and handsome — hair light fine and delicate — the forehead rather prominent — large upper lips which is considerably grooved — the body large in proportion to the extremities — but this last more often points out scrofula of the mesentery„ To the above we may add an occasional swelling and flushing of the face, with fatigue on slight muscular exertion

Mr Hunter says that the disease is most prevalent in temperate latitudes, above fourty five„ he supposes that going from a cold climate to a warm excites, and that the opposite direction cures it — We think this altogether problematical — It will be easy to conceive of predisposition gradually wearing out, and gradually becoming extinct, from a long residence in a warm climate — and that the disease is endemic in England while it is not known in Spain — but we must confess ourselves unable, to see where Mr Hunter's opinion could be founded

The most scientific observers of the

The laws of nature are now agreed as to the hereditary character of scrofula— and we believe it to be as much so as any particular habit or temperament can be continued from Parent to child— we are aware that objections coming from very respectable sources have been urged to the contrary but we are more disposed to admire them for their ingenuity than suffer them to convince our Judgment.

The great difficulty of ascertaining in where family predisposition, does exist, or when it does not, has been the reason, why some, have supposed, it not hereditary,— but the fact that we hardly ever see it but some family taint may be traced, especially if we go back far enough is sufficient to convince my Judgment— We are not merely to ask the father, or Mother, but the inquiry must be carried, back several generations, or we shall fail to get the truth.

The predisposition may be counteracted and opposed by circumstances, so as entirely to exempt certain children of the same family, thus Parents that send their children into the country, where they breath a pure air— and their earliest muscular strength, is promoted and called into action, by exercise, may so obviate predisposition, as to be entirely free from

from disease, while perhaps, a sickly Brother or sister, under different circumstances may be labouring under Rachitic scrofula at home. The females of the same family may be subject to the disease while the males are exempt, but most generally the children resembling the diseased parent will have the strongest predisposition, and therefore most liable to an attack of the disease

The time of life when it most generally makes its appearance, is from the age of three to ten years, sometimes later in life, but seldom so troublesome, after that age — but is frequently in a disguised form seated in the substance of the lungs — and generally affects males from the age of twenty two, to thirty five, and females from the age of fifteen to twenty five, this is glandular consumption, very aptly called by Dr Hoffman, in his very good treatise on scrofula, or in common language Phthisis Pulmonalis, for he very justly infers, that Tubercles in the lungs are no more than scrofulous tumors, the result of a strumous predisposition.

If persons pass their thirty fifth year in health, though strongly tainted with the strumous habit, they will generally find their health improve after that in proportion to their active or passive employments in

in a damp moist, or dry serene climate, and their avoiding other exciting causes.

Eruptive diseases have been charged with producing this, more particularly, Rubeola, and Variola, They never have this effect without there be some latent predisposition in the system which they have the power of exciting into action, It is said to follow the Rubeola, more frequently than the variolous eruption, and the reason why it does is very obvious, as the affections of the lungs are more considerable in the measles than small Pox, thereby disabling their glands and predesposing them to scrofulous tumors and Ph Thisis, which we must suppose more frequently, follows than any other form of scrofula.

Females are said to be oftener the subjects of this disease than males, this remark will be found on observation correct, and we need only reflect on the sedentary lives of females in easy circumstances — their exuberant lymphatic system, and their abundant supply of Juices, to see the propriety of the observation.

We have now arrived at that part of our essay where we must say something of the nature of

Scrofula, or what it consists in, here our weakness would suggest the propriety of shrinking from the task, but having engaged thus far in the investigation of the subject we cannot at this particular period withhold our opinion.

We believe that the disease in question, consists either in a languor, or peculiar, constitution, of the lymphatic system — congestion in their calibers, following as a necessary consequence, on the preexisting debility — produces all the phenomena of scrofulous tumors.

The contents of these tumors are in the first place albuminous lymph, and after the disabled absorbents have only been able to take up the most fluid parts, leaves in the tumor, a matter of a thick, suety, like, appearance — which on examination is found to be no more than concreted Gluten.

This view of the subject will at once account for all its phenomena, for in infancy more than any other period of life, albumen, is superabundant & is known to abound in excess, in strumous habits.

If we are correct in our opinion that a deminished mobility of the lymphatics is the cause of all that takes place, it is evident, that their fluid will

will be disposed to stagnate, where, the impelling force is least, viz^n in the glands.

When the disease is called into action by any of the exciting causes, as cold and moisture, or what ever tends to disable the general system, and depress, still more the extreme vessels, the following symptoms will be perceived though modified according to the degree of predisposition and habits of life.

There will be seen a fullness and flushing of the face, eye balls prominent, and somewhat inflamed discharging in the morning, a sharp acrid humor coveling that part over which it passes — lids of the eyes swollen — to these succeed small tumors, under, the chin, and on the neck — swelling of the upper lip — the mucous glands of the nose sometimes, suffer, as do similar glands in other parts of the body.

Scrofulous tumors rarely if ever, suppurate from their being placed, out of the reach, of the red vessels — they never contain pus, untill many, lymphaticks are ruptured, and some vessels conveying red blood are impli=cated, then it is only a mixture and not pure pus.

The great desideratum being obtained the

the nature of scrofula being fullly proved, viz^d that from a disposing disability, first of the whole system, a descrepant action of the out posts, of the animal economy takes place (exhalants and absorbents) thereby subjecting, glandular parts, to inflaction, which produces all the mischief in question

We as masters of things evident as well as those not evident, to the senses, at least with regard to the human body, and it being our most lauded privilege to behold nature unmantled — and though attired in the most opaque robes to the common herd of mankind — permitted to behold her hidden and most secret parts, we shall easily perceive how we are to adchess our means of Treatment.

We shall not ascribe to any one article of the materia medica the power of curing the disease nor shall we attach any praise to any particular Physician, for his success, or rational treatment — for we believe that Kings and Doctors have been equally fortunate in curing the ailment, Edward the confessor caused 29,107 persons to subject themselves to the Touch of Charles the seccond in a certain number of years, and this was continued, both in Englan

an

and in France untill they were found alike susceptible of the complaint, neither shall we subscribe to the popular method of treating the disease at present, which has generally been to prescribe on the offset, the most powerfull tonics of the whole Materia medeca, such as the Bark, muriate of Barytes, Nitrous acid, and others, we object to this, (though they may lessen somewhat irritation from debility) because they must assuredly increase the action of the exhalents, which are probably doing more, than their duty, and as a necessary consequence increase the debility of the lymphatics, which must add to the congestion,.

We shall act wisely by lessening the irritability of the heart and arteries, by means that reduce not their, force but their frequency, thereby giving the oppressed absorbents, time to react, and recover their mobility, which will be our business honestly to assist

The first of these indications may be admirably accomplished by a judicious use of the Digitalis either alone, in the powder, or tincture, or combined with the blue pill, the circula may be triturated with the blue Pill and used with the same intent, all cordials are to be prescribed, during the use of these means, and if any stomachic

is

is wanted, the infusion of Colombo with some aromatic may be used.

The external means, at this time should be friction, by rubbing on the surface of the parts affected, stimulating ointments in which camphor is an ingredient, the common mercurial ointment, into which a proper quantity of finely powdered camphor, is rubbed, any of the stimulating ointments that have the effect of exciteing the absorbents to action may be used — the body should be often cleansed with soap and water, saponaceous plasters may be applied over the tumor, blisters will have a good effect in dispersing the collections, and stimulating the parts to a vigorous action — bathing in sea water may be resorted to.

The current in the lymphatics being restored, the tumor begining to disappear we are to commence the tonic treatment in all its extent.

The muriate of Barytes has been highly recommended by Crawford & Rufeland, but John Burns says that not much dependance can be placed on it — and if there be any virtues in this medicine, it must be that of its powerfully invigorating the general system, and on this account had better be used in the ulcerative stage

The muriate of lime has been much extolled, as a remedy for this disease, we are unable to say what its advantages are.

The cicuta has been much eulogised as a cure for scrofula by Baron Storck, Fothergil and others,, this will be in the hands of the skilfull one of the best remedies, in this disease

The Journal of Medicine gives us a remedy composed of the Limatura Ferri, muriate of ammonia, Kali Preparatum.

Mr Burnes thinks the nitrous acid, a valuable remedy in disposing the ulcers to heal

The remedy from which we are to expect most is the calcined sponge or the sub carbonate of soda with some aromatic, a bolus, of ten or fifteen grains may be taken twice or thrice a day, continued two or three months will generally cure the disease,, this medicine is now more relied on than all the whole materia medica beside in the cure of scrofula.

Opiates will be of primary importance during the whole course, as allaying irritation

Mercurial Emetics have been recommended by some of unown in medical science, the Turbith mineral

Mineral may be used for this purpose, and is justly esteemed a powerfull exciter of absorption

The arsenite of Potash, from its well known tonic power, we donot hesitate in recommending as a medicine likely to produce the best effects

Peruvian Bark has been much used and with good effect in the stage, when tonicks are indicated.

In the ulcerative stage all relaxants are pernicious, stimulating and astringent appplications must be made, such as a strong, solution of muriate of soda, burnt alum — solution of muriate of ammoniac

Perhaps there is no disease so hard to eracticate from the body as this, and therefore all the curative means as well as preventatives should be continued untill the age of the child shall, have acquired, some command ove the predisposition

The means of preventing it will be suggested from what has been above hinted at, viz — attention to exercise, pure dry warm atmosphere in an elevated situation — drinking of saline or mineral water, see bathing &c.

Trachocele

Is a disease seated in the thyroid gland, evidently depending on a scrofulous diathesis, and therefore we shall treat of it here as a Scrofulous complaint.

This we infer from its occurring most frequently in scrofulous countries, as in, Switzerland & England, its not being known in dry warm climates its occuring at the same period of life, most generally its being attended with the same phenomena— its depending on cold and moisture, as its exciting cause — its being cured by the same remedies— its attacking other parts when removed from the Thyroid gland every one conversant with the various accounts, of this disease will recollect cases, that have terminated in Phthisis Pulmonalis, after the cure in the Thyroid gland, this is shewing one fact with regard to scrofula in general viz— that when cured in one part is very apt to shew itself in some other.

No man can read the accounts of Bronchocele given by authors, and observe the prescriptions

prescriptions for its cure without, having inseperably connected in his mind this disease and scrofula - but he that is perhaps, stronger wedded to a favourite hypothesis than to true investigation.

We observe in all that we have read of the subject, a fondness for mercury as an alterative as in strumo, and the same caution, to avoid as extremely hazardous a salivation,, This would grant us every thing we could ask for were we disposed to go farther into a defense of the theory, for we think that if it was a dropsy of the gland or any thing but a strumin collection, mercury would be a specific — Scrofulous tumors are the only tumors that will not acknowledge the gigantic power of mercury

The functions of the thyroid gland are not agreed on by physiologists, and as we are not disposed to fall in with the hypothesis of our lustly celebrated countryman, Rush, we shall not relate them, being founded on mere conjecture, without a single fact to support them but must acknowledge our surprise at the construction of this gland, so abundantly supplied with blood vessels without having some office in the animal economy

[illegible] + [illegible] always

to perform, we find four considerable arteries going to this Gland, two to each lobe and seems well calculated for secretion

The disease is better known in medical works by the name of Bronchocele from the greek word βρονχος, the wind pipe, and κηλη a tumor situated in one or both lobes of the gland — is cold and unattended with inflammation or pain

The symptoms first presented to the view of the Practitioner when called — will be a large tumor under the chin, and on the fore part of the neck — difficulty of breathing as in cynanche Trachealis — a peculiar inexpressive countenance, with imbecility of Intellect — muscular disability enlarged joints — tumid abdomen — great disposition to sleep — the pulse weak and frequent — some of these marks may be occasionally absent — but they will for the most part attend, especially in young subjects

The predisposing cause is found to be precisely that of strumo in general, which we have before said to be a peculiar constitution of the lymphatick system disposing them to be operated on by exciting causes.

These are cold and moisture or what ever

ever tends still more to depress the diseased lymphatics; hence the disease is more often met with in the vallies of the alps, in Derbyshire in England and in the low and damp vallies, in mountainous parts, of our own country.

The difficulty of breathing arises from the pressure on the Trachea, and this will also account for the weakness of Intellect and coma, the system being imperfectly supplied with oxygen, from the small quantity of atmospheric air, taken into the Lungs.

The difficulty of deglutition is caused by the same pressure on the Esophagus, and is most considerable when both lobes of the gland are affected.

The treatment may be divided into the local and general, the object of which will be to excite the action of the absorbents.

The local means are those applied immediately over the tumor, as Blisters, setons, Issues, placed in the substance of the gland, any means likely to create inflammation, for this end the solution of Tartarized Antimony may be used, the ointment of the Tartarized antimony, saponaceous plasters — strong solution of the

Muriate

Muriate of soda, and a solution of the muriate of ammonia
Camphorated mercurial ointment, rubbed around the
Tumor — caustic applications have been much used
for the purpose of evading inflammation and suppu-
ration, the principle is certainly a good one though
first resorted to by Itinerants, the body should be after
cleansed with soaps and water, perhaps, the warm
bath might be used to a good effect

The general indications will
be to allay arterial irritation while the strength of
the system must be supported, an opiate at night
with a blue pill, for several days in succession, and then
a purge of Jalaps and calomel, the cicuta combined
with the blue pill, avoiding any thing like a salivation

Should these means fail we are
to resort to the use of the calcined sponge or the
sub carbonate of soda as its basis may be used, a
bolus of ten or fifteen grains combined with some
aromatic is to be placed under the tong and suf-
fered to dissolve and then swallowed, repeated
two or three times a day, and continued two or
three months will seldom fail to cure the
disease

Doctor Darwin advises a solution of the muriate of Soda to be retained in the mouth and swallowed, frequently and in sufficient quantity to have a laxative effect

Saline waters have been by all regarded as means deservedly ranked among the most powerfull curatives in scrofulous affections.

During the whole course of treatment we are to attend to the debility of the system We shall find a glass of the cold infusion of the Bark, a columba with some aromatic, a good tonic for the stomach, all cordials and stimulants will be heartfull.

It has been said by some that the extirpation of the tumor was practicable, but has never been done with success, nor can it ever be done with success, without the whole gland, could be taken away, and perhaps, this cannot be done.

We think the tying up its arteries for the purpose of cutting off its supply of fluids equally, as uncertain and unsafe.

Jno T. P. Geargain

1820

An

Inaugural Essay

on Hysteria

Submitted to the Consideration of the

Rt Revd Jas Kemp D.D Provost

and the Medical Faculty

of the University of Maryland

For

the Degree of Doctor of Medicine

By

Washington Duvall

of

Montgomery County

Maryland

Symptomatic × Idiopathic

Febrile –

Tonic plan

To

John B. Davidge A. M. M. D.
professor
f Anatomy and Surgery
In the University of Maryland

orthy Sir

Impressed with a greatful sense
he favours which you have conferred upon
in the course of my Medical Studies
der your direction, I Embrace with pleasure
opportunity of publicly Acknowledging
r friendship and that I have derived from
Considerable improvement in Medicine,
Be pleased therefore, to accept of this
timony of my thanks, and permit me to
dicate to you this Inaugural Essay

Believe me to be, Sir with the Greatest
ncerity, Your Much Obliged Friend and
Pupil.

Washington Duvall

Hysteria

Though diseases are not all Equally dreadful in their attacks or fatal in their consequences. yet there are some which occasion so much distress and uneasiness while present, that our sympathy is strongly called forth for the sufferer and a desire Excited to releive them if relief be possible.

This sympathy is still more awakened when we are forced to witness the effects of such diseases on the frames of the fairer part of the human race, while feebleness and inability to resist call most Earnestly for our aid and support. Whose delicacy and softness endear them the more to us by appealing to our Generosity and better feelings.

At a particular period of Life, we know a Change is effected in the female sex, which

totally alters the appearance of the form and the actions of the System. It is then the Loveliness, dignity, and Grace of the woman displace the childish aspect and awkward Gestures of the Girl. To the Majority of the Sex this is the commencement of a pleasant Maturity. Yet to a great number it is the beginning of a Series of Maladies which are prolonged in an unremitting chain, till the afflicted victim harrassed and worn to a shadow by the reiterations of disease, at Last finds a rest and refuge in the undisturbed quiet of the tomb. –

The Change which takes place in the System when females arrive at their Maturity gives the Uterus an importance which before it did not possess. So that in a great Multitude of cases the smallest irregularity

in Point of Living affects this organ and the Consequences are soon Evident throughout the whole of the body. In short from whatever cause it may proceed or whatever purposes it may serve, the Secretion when suppressed, retained or irregularly performed, Excites a train of distressing affections which deprive the Sufferer of all enjoyment and render Life scarcely desirable.

The Hysterick disease is a General disease. For almost all the diseased appearances are produced by the causes we have mentioned. We shall find it comprehending a greater variety of Symptoms and assuming such a Multiplicity of forms as difficult to understand, as to remove. Still it is only by close attention and patient investigation that we can hope to obtain an useful acquaintance with it.

In describing the disease we must not expect to compress into a few sentences its peculiar distinguishing characteristicks. We must give a History of the disease rather than its diagnostick Symptoms.

The persons most subject to Hysteria are delicate women whose nervous System is extremely irritable. This delicacy of body and weakness of nerve is in no small degree brought on by an inactive and sedentary Life, a Suppression, or obstruction of the menses, dissipation, Grief, anxiety, Low diet or unwholesome food. Hysterick Complaints are more frequent in the early and single part of Life than in the Married, Generally from the time of Maturity to the age of thirty five. But I am certain that some have it as Late as forty

or forty five years of age, or up to the time of the Cessation of the Menses. persons who are subject to such complaints very readily fall into a paroxysm when any extraordinary emotion of the Mind is produced either by fright or joy or Anger or disgust.

There is no disease with which Hysteria would be possibly so soon confounded with as Hypochondria its attacking the sanguine and youthful. its suddenness and violence in the paroxysm depriving the patient of sense and voluntary motion, being attended with a sense of suffocation and much spasmodick action will distinguish it from Hypochondriasis.

This Last seldom comes on untill after the age of thirty five. attacks the Melancholick is slow and gradual in its approaches, and

Exerts its bad effects most on the Intestines. The Hysteria terminating most frequently in Epilepsy, the other in Low fever. Hysteria becomes Lighter as the patient advances in Life, Hypochondriasis on the contrary is very much increased in Severity. From common Syncope Hysteria may be known by the face being more coloured and the pulse generally perceptible though weak. The pulse however in some cases is imperceptible for a Length of time, which is sufficient to Excite a great deal of alarm in those who are inexperienced.

Hysteria may be distinguished from Apoplexy by the absence of sterterous breathing, and total privation of sense and motion, which is common to the Latter. From Epilepsy it may be known by the Symptoms

not being so violent, the sudden transitions from laughter to weeping, and the profuse flow of Urine which is often observed in the disease under consideration

The Hysterick disease after having continued with great violence for a long time induces a degree of fatuity and often ends in Epilepsy.

Hysteria comes on in paroxysms which are preceeded by a long train of symptoms, such as dejection of spirits, anxiety, difficult respiration, sickness of the stomach, nausea, vomiting, palpitations of the heart &c. Most commonly a pain is felt in the left side with a sence of distention advancing upwards untill it reaches the stomach and finally the throat, where it occasions a

sensation similar to the pressure of a ball of hard matter in the throat. This has been termed the Globus Hystericus. When the disease has arisen thus high, the patient appears to be suffocating, becomes faint, stupid, and insensible, the trunk and limbs are variously agitated, the actions of the body are wild and irregular, laughing, screaming or weeping, with incoherent exclamations, a temporary delirium and frothing at the mouth are to be observed, As the spasmodick actions subside a quantity of Air escapes by the mouth. The patient sighs or sobs and is slowly aroused, without a consciousness of what has happened, though complaining of a soreness sometimes of the whole body.

These are the most common and noted occurrences in Hysteria. The varieties of its

form are almost endless. It sometimes is unattended by Convulsions and the patient as if profoundly asleep without sense or motion. Sometimes it is accompanied by a violent Hiccup, which has been known to remain for several days, which has gradually decreased or terminated in the death of the patient by causing suffocation. This however occurs very fortunately in but few instances.

Some are attacked by violent pains of the back, extending to the sternum and the region of the stomach, attended by spasms which are so violent as to throw the patient into the most dreadful pains, attended by cold clammy sweats, cold extremeties and a feble and scarcely perceptible pulse.

Although in the Majority of Instances the patients during a fit of Hysteria are prevented from injuring themselves without much difficulty the Convulsive actions are frequently so violent as to require the united Exertions of Several persons together with bandages to prevent feeble women from injuring themselves most grievously.

Our prognostics in Hysteria must be governed by the age and condition of the patient, the repetition of the paroxysms and their degree of violence as well as the Length of their Continuance. The success of our treatment in Hysteria will always in a great degree depend on the correctness of our acquaintance with its causes and the timely application of our

Medicines. The difficulty of removing it being very much proportioned to the Length of time it has held an undisturbed dominion over the System.

As to the cause of Hysteria, we cannot Long doubt that although it must opperate on the nervous System at Large. Yet it is on the Uterine System that the most powerful impresion is made. We find by Consequence that the disease rarely or never occurs, at Least in an high degree, untill the patient shall have arrived at maturity and the particular Secretion from the uterus shall have been disturbed or Suspended.

This is soon productive of the disease and it is necessary that we should direct our attention to the System in such

a manner as to strenthen the system generally and the uterus in particular.

As we are most frequently called to see this disease during the paroxysm, it will be proper to mention the treatment which Experience has shewn to be most advantageous, in removing the immediate injury during the paroxysm, our indication is to remove the spasmodick actions so violent and distressing, which can only be done by some agent that will produce a decided action on the nervous System.

The Remedies that have been mentioned best calculated to produce this effect are of the Antispasmodicks, a division of stimulants whose impressions appear to be made more immediately on the sensorial energy or General nervous System without exciting the heart and quickening the Motion

of the Blood. The best of these remedies are Ammonia, the Fœtid Gums, Castor, Valerian, the Compound Tincture of Guaiacum &c. By Exciting the System with such articles we can readily succeed in most cases in removing the immediate danger. It is necessary however that we attend to the patients secretions and assist nature in the discharge of the contents of the bowels, if there be any difficulty or delay.

The Treatment of this complaint must vary, according to the object, the practitioner has in view to resolve a paroxysm, or to prevent its recurrence. The first and best indication is Bloodletting, it is usually necessary especially if the subject be young and plethoric. In constitutions

of greater delicacy that remedy is less requisite. In every case however it is safe, and in most useful.

Emetics have been recommended in paroxysms, merely to rouse the patient. But they are of little service. If the stomach is affected at any time with phlegm, so as to excite nausea, a gentle emetic may be taken to remove it, or if there is a tendency to costiveness it may be obviated by some gentle laxative.

During the paroxysm if there is costiveness a laxative glyster with an addition of asafoetida or castor may be thrown up into the intestines, and where the fit continues for any length of time a small blister may be applied to the inside

of Each Leg. Blisters are not of much service, Except there is great insensibility. Bathing the Feet in warm water has been of considerable service. Also the dashing of Cold water, on the Extremities, is occasionally productive of a similar effect.

The preservation of a regular habit of body, is an object of great importance, in the treatment of Hysteria, and, if the disease arise, from the obstruction of the catamenia, that secretion ought to be promptly restored.

The most difficult part of the treatment remains, that is, to prevent the reiterations of the paroxysms, which we have stated can only be effected by means of the General System. We do not however pretend to deny that many

Medicines exist which appear to operate more particularly on some organs than others. The compound Tincture of Guaicum appears to have been productive of the most beneficial results, when administred to a proper Extent.

We are however in possession of a remedy of still greater powers and productive of more certainly beneficial results. The Tincture of Cantharides introduced in this Complaint by Dr Mackenzie of Baltimore, almost gives us a hope of removing every Case of this disease without difficulty.

Yet it must be given to an Extent and with a boldness which will appear wonderful to those who have never witnessed the practice. To speak of the particular number of drops suited to the Generality of cases would be irrelevant,

as the medecine must be given in all Hysterick complaints in such a manner as to produce that effection of the Bladder denominated strangury. When this occurs it must be relinquished for a short time and resumed again if the disease shall not have been removed.

At the same time it would be highly remiss in us were we to neglect the use of Exercise, the Mineral and Vegetable tonicks and the Cold bath. There are other remedies recommended in Hysteria, But I think they are unnecessary.

It will be readily discovered by the readers of this paper, (should it ever be so Fortunate as to obtain any) that it is the effort of a beginner in obedience

to an established Law, not a voluntary exercise for the sake of Fame. As he had but little new to offer, so he would not wish to tire the patience of his preceptors by a prolix repetition of what they already know better than himself.

When he looks back on the period he has passed in attending the Lectures of the University, he cannot help acknowledging the kindness of his revered preceptors, he is unwilling to pass by this opportunity of returning them his sincerest thanks for their attentions, of breathing his devoutest wishes for their individual prosperity and the prosperity of the university over which they in so distinguished a manner preside

1820

Cynanche Trachealis

An Inaugural Dissertation
Submitted to the inspection
Of the Right Reverend James Kemp & D.D. Provost
The Regents & Medical Faculty
Of the University of Maryland
For the degree of Doctor of Medicine

By Robert Goldsborough
Of Queen Anns County
Maryland

To John B Davidge A. M. M.D.
Who to the highest degree & professional skill,

Adds,
all the Urbanity & polished manners,
Which so eminently distinguish him
As a gentleman & teacher
This humble effort is respectfully

Dedicated
by his
friend & pupil
Robert Goldsborough.

Man, though Lord of the creation & sovereign over the earth, claims no exemption from that unalterable regulation, which demands the continual change of material forms. Though he is enabled by the energies of his mind to subjugate & render inferior beings subservient to his purposes; though assisted by his imagination, he can view every region of the earth or soar to the contemplation of the heavens; though his knowledge ~~of the~~ may bring forward the powers of nature for the performance of his will; still, he is frail, perishable mortal. The avenues to death are ever open, & at most but a few years elapse between the song of his nurse over his cradle & the wailing of his relations around his bier; from the noise, the gaiety, the bustle of his youth, to the silence, the solitude, the chillness & repose of the grave. Through all his existance he is "in the midst of death"; the king of terrors respects not the tenderness of his infancy, the vigour & lustiness of his

manhood or the infirmities of his old age. To each of these conditions, he is indifferent & whenever the blow is given ~~life~~ life is extinguished.

It is in his infancy that man is exposed to the most danger. The tenderness, fragility & delicate contexture of the infant system are poorly able to withstand the effects of neglectful mismanagement or the encroachments of disease. Yet children suffer so much without complaint, & their nurses are so inattentive to the first appearances of their indispositions; & the symptoms, which give us the first notice of the enemy's approach, are so slight, the the solicitude of the parents is frequently excited too late & the resources of art are applied for in vain.

Thousands thus perish in their dawn of life, & "the pale nations of the dead" are increased by multitudes, that ~~might~~ by timely attention & judicious treatment might have been preserved to gladden

the feelings of their parents, add to the blessings of sociallity or to increase the radience of their country's glory.

Our country has lost perhaps more in this way than any other, & the disease whose name is prefixed has contributed largely to this work of distruction. Such reccollections render the study of the diseases most common to the early periods of life highly interesting, & it is only from the exertions of individuals that additions can be expected to our knowledge of this subject. The disease on which this paper is written has been of late very thoroughly examined, & is generally so well understood, that I can expect to say little that is not known; yet it can never be unprofitable to repeat truths the utility of which do not cease with their first enunciation, or present in a new dress ideas of too much value to

allow them to be forgotten.

History of the Disease

The Cynanche Trachealis is generally prevalent at the seasons of the year in which the most sudden alternations of high & low temperature are to be observed. In weather becoming moist & cold after a continuance of mild & clear weather the greatest number of cases appear. It is ~~most~~ not known as an Epidemic disease, although it is in some seasons very common; it has been noted to belong in a manner to particular families, whose children were all in a remarkable degree subject to its influence.

Children from three to ten or twelve years, more especially those of robust habits are generally the victims on which it seizes. It is unknown after the age of puberty, unless in some very few instances. At the conclusion of other diseases adults sometimes are affected in such a manner as very much to resemble this destructive malady.

Seat of inflammation

Drowsiness, forgetfulness, & inactivity for a day or two precede Cynanche Trachealis. The eyes are heavy & suffused; the child seems feverish & restless, & it is from the commencement disturbed by a cough of peculiarly shrill sounds. The breathing is difficult & the cough increases in violence in the course of a few days. It is shrill, distressing & every fit of it agitates the sufferer extremely. There is a flushing & swelling of the face; the eyes are thrust forward, a tremor of the whole frame ensues & every repetition of coughing is accompanied by a convulsive gasp for breath.

The difficulty of breathing increases with the continuance of the disease. The tonsils & uvula are swollen & in the excess of agony for the want of air, the head is thrown backward. The sounds of the cough is peculiar & Respiration is attended by a sound similar to the noise ~~of~~ attending the elevation

of the piston of a dry pump, or as if the air was forced to pass by some spongy body in the Trachea. The cough is seldom accompanied by spitting, or if any thing be expectorated, it is somewhat purulent, mixed with films of coagulated lymph. The patients are thirsty & feverish, an unpleasant heat is felt over the whole body; there is great restlessness, & inability to remain in one place; the countenance is anxious & disturbed, the pulses are frequent & delirium often occurs. *

If the disease shall have continued long without attention, & the symptoms are aggravated, language hath no expressions capable of pourtraying the suffering of the patient. The difficulty of breathing increases until the act of inspiration is attended by a harsh, stridulous almost indefinable sound, which some liken to the ~~barken~~ barking of a small dog or the crowing of a cock. The face assumes a livid ~~[illegible]~~ appearance;

the eyes seem bursting from their sockets; the patient with heart-rending importunity clings to the bystanders with a vain wish for relief; the breathing is intermitted for some seconds; the pulse flutters; Respiration ceases & death relieves the sufferer from endurance of his pangs. ~~of which no idea can be formed unless by those who have had the misfortune to witness the like~~

The Diagnosis

The only disease with which Cynanche Trachealis is likely to be confounded is the acute Asthma of children but even this may be readily distinguished by the following signs.

In Cynanche the cough is frequent & ringing; asthma has but little if any. Acute Asthma has remarkable intermissions, attended either by an evacuation of bile by vomiting or purging or a belching of air. Cynanche has no

℞ Pulse strong ?

intermissions. In Cynanche the pulse is strong; the febrile heat great; the voice small & shrill; the urine high coloured. Acute asthma is attended by a softer pulse, limpid urine, & hoarse dull or croaking voice.

Appearance on Dissection

The importance of the investigations made with the knife of the Anatomist is undoubtedly great. By such research we are enabled to arrive at correct & philosophical notions relative to the nature of diseases, as it is only thus we can be made acquainted with the changes produced by the action of morbid causes.

It is only in the power of human intelligence to ascend in reasoning from effects to causes, & it is only thus our opinions are correctly formed or our principles firmly established.

Patients dead of Cynanche

when opened present to our view a suf-
ficient number of changes to lead us
towards an acquaintance with the
disease. The lungs are either inflamed
at different points of their surface, or
are filled with an effusion of dark serum
or blood. Pus is sometimes found in small
quantity & the Bronchiæ throughout the
whole extent of their ramifications re-
plete with mucus more or less approach-
ing a coagulation or jelly appearance.
This mucus or lymph-like matter
is found frequently in immense quan-
tity, so much so that Dr Potter men-
tions one dissection at which he assis-
ted, where this substance filled a large
dish when removed from the lungs.

The Trachea suffers considera-
bly in Cynanche on account of this
effusion; & it is remarkable that the

effusion in it takes on more or less the form of a membrane in consequence of the passage of the air over it, & the evaporation of some of the fluid it contains. It is this which produces the peculiar sound in Respiration & it is owing to the gradual increase of the effusion that the Bronchia are filled, & the air is denied access to the lungs, & the fatal event takes place.

Pathology

The evidences above mentioned are sufficient of themselves to persuade us that the disease is in its nature inflammatory. We should however be led to this conclusion irresistably, if we considered the symptoms of Cynanche attentively. The fever, the cough, the difficulty of breathing, the flushing of the face, the suffusion of the eyes, & the disordered state of the pulse, speak very audibly that the work of inflammation is going on. We are further suppor=

supported in this opinion by the utility of the measures for the relief of common inflammation, when applied to this disease.

The Treatment.

Having established in our minds that Cynanche Trachealis is in reality an inflammatory affection, it is not difficult to conclude on what means should be resorted to, if called in time to the disease. To the early use of blood-letting we should be indebted for the greatest benefits & perhaps render the use of other unnecessary agents ~~use~~ ~~less~~. In the performance of the operation, we must be governed as to the extent ~~of~~ we shall push the abstraction by the state of the symptoms. The pulse cannot be altogether depended upon, & there is greater danger from loss of time than loss of blood in the first stage of Cynanche. But from circumstances heretofore mentioned it frequently happens that the aid of the Physi-

Physician is sought too late for the prompt enforcement of this plan. The disease has advanced rapidly & a great quantity of mucus is lodged in the Bronchiæ & Trachea, causing an approaching strangulation. There is a pressing necessity that this should be speedily evacuated that the air may have access to the lungs; & to effect this purpose we must resort to an Emetick.

In this cruel malady, however, a great degree of insensibility of stomach exists. This may results from the morbid increase of the secretions in that organ preventing the application of the medical material to the nerves of the stomach or from the loss of vital energy throughout the whole system consequent to the want of a due supply of the cherishing air. Hence we are obliged to resort to the employment of the most active medicines in the largest doses even in delicate children. Ipecacuana

warm bath

or Emetick Tartar may be used first, but should they fail in producing the desired effect, it will be necessary to resort to the use of Sulphate of Zinc or Copper. When all these have failed Dr. Potter recommends the exhibition in small doses of the Oxymuriate of quicksilver itself

The vomiting should be followed by the application of a large Blister to the throat & it may be advisable to employ the warm bath at the
* same time. Such is the violence of the disease that if we were to depend on this treatment solely for success we should be too frequently disappointed.

We are possessed of a remedy of which if rightly administered removes all danger & renders the resort to any thing else useless. Yet in this disease it must be given in quantities that will excite the clamors of the preju=

prejudiced & ignorant, no less than the surprised of the literate though inexperienced. Calomel is here meant & we owe great thanks to Dr Potter, & others, who have carried this practice to the extent & with the success that it has been. It is to be given in 2. 3. 4 or more grains every three or four hours, beginning with doses somewhat proportioned to the age of the patient. It is seldom known to produce any other effect than the removal of the disease, nor is it usual to hear of any ill consequences from its use.

The use of Polygala Senega is now well known, & as this essay is not penned with a view to the instruction of those to whom it is submitted I shall for the present pass it by.

The Hydrosulphuret of ammonia has been recommended in France, &

1820

An

Inaugural Dissertation,

on the

Modus Operandi of Medicines,

submitted to the consideration of the

Right Revd. James Kemp, Provost,

and also to the

Medical Faculty of the

University of Maryland,

For the Degree of Doctor of Medicine.

By Benjn. Winwood of Baltimore,

Member of the medical society of Maryland.

To

Samuel K Jennings A.M. M.D.

Dear Sir

The high respect which I entertain for your talents, as well as the probity of your conduct. and your deserved reputation. as a physician, together with the great benefits. which I have received from your instructions; demands my grealfull acknowledgments to you. may you long live a blessing to mankind and your family, and enjoy those pleasing reflections, which can alone result from a consciousnes of doing good. Is the fervent.

desire of; the

Author

The great varieties of opinions entertained among physicians of all ages respecting the mode in which different remedies act in cureing disease, and restoreing to health, will not be expected from us minutely to detail. The principle object of this essay, will be to adduce, those theories which are supported by the greatest number of facts, and which accord best with our present views of the animal economy. The grand object of man in all ages of the world, has been to obtain a share of that reputation, which has been reflected on the wise and good. This has stimulated men to exertion, and to the discovery of means whereby they might effect the object in view. I shall in this essay introduce such matter, as shall comport best with the object, which presents

itself. Which is to eradicate false theory, and expunge those opinions, and sentiments, which are not supported by analogy, or founded on a warantable basis. Many of the ancient opinions concerning the operations of medecine on the system are so extreamely incorrect and rediculous; that they do not merit a serious refutation. And even to the days of the celebrated Cullen. we find authors speaking of diseased fluids, and considering the action of medecine to be in an especial manner upon them, changeing and altering their consistence and by that means effecting their intended object; hence inspissants attenuants antiseptics & and a variety of other termes; no less unmeaning and rediculous. Even this great man, we find not intirely exempt from the taint of humoral pathology. He has made.

use of many terms, which clearly evince his belief in that system; to a certain degree although he has expunged; a great variety of the miserable Jargons of the schools. about the beginning of the seventeenth century, we hear physicians speaking of the influence of the planetary system, on the vegitable world. They observe in conjunction with the virtues of the medicine the domenion which the various planets hold over it: And thus they reason on the manner in which it cures a variety of diseases; estimating their qualites from a view of their government; and the particular manner in which they acts upon particular organs. These ancient superstitions, will not claim our attention, at the present day; as they have long since been forgotten. In discourseing on the operations, of various

medicines on the system, we shall mention those to on which Dr Cullen believes them to act; ~~on~~ he considers them to act upon both solids and fluids. The operation on the solids he divides into two kinds; first as they act on the simple solid and seccondly on the solida viva, or the organs of animals whose properties disapear with life. This division of the subject, leads Dr Cullen into the operations of particular medicines, which he supposes to act on what he calls the simple solid, increasing its cohesion. In this manner he attempts to explain the operation, of that claps of substences denominated astringents. These he supposes to act merely on the simple solid, in a manner similar to the operation of tannin, on dead animal matter; without any reference to that principal;

which we believe governs, all animate bodies.
As all parts of the system is supplied with
those elongations of brain, we call nerves so
it is correct to infer; that all parts of the
system are supplied, or in possession, of sen-
sibility, or excitability, that is the capability
of having sensation excited, in them: and
the particular connection which the dif
ferent parts of the body, bare to each.
other will in some measure tend, to ex
plaine those various sympathies, which we
observe to exist between particular organs.
As well as the operation of different,
medicines in producing there effects upon
the system. So minute are these filaments
of nerves, and so much connected with
each other, that the sympathies of the
different organs with each other, are so

intricate and inexplicable. Hence the sympathy, which exists between the uterus and mamma the uterus; and the stomach; the head: and stomach; beween the right side in hepatitis, and the right shoulder; and also beween the Kidney, and thigh in Nephritis, and a variety of simelar impressions in other diseases; deduceing from this variety of effects, the minute connection, which subsists between the different parts of the system, by means of nerves; how diversified must the action, of the various medicines upon them be: seeing the great and intimate connection, which exists between different parts of the body. Again when impressed with the idea, of the almost endless variety of stimulents, which present themselves to our view: and when,

we consider that all these stimulents are in opposition to the theory of Dr Brown, who considers that they act with merely greater or lesser degrees of force, or in other words, that all those substences in the Materia Medica, which act by producing excitement, produce only a greater or lesser degree of this excitment, and not as specific stimulents acting differently one to another? The last sentiment we must subscribe to; because we observe so great a diversity of effects produced by the different medecines, and not according to Dr Brown only a variation of excitment. Thus we observe opium to produce a stimulation sui generis; mercury acts in a different manner; and Digitalis again different to either. And so we

might go on, through the great variety of the articles of the Materia Medica. In speaking on astringents; we did not presume to deny that they acted upon the simple solid; but only that the beneficial effects resulting from them, should not be ascribed, to this principal in the living state of the animal; as in a variety of diseases connected with debility; they have been said to act by constringeing, or corrugating, the animal fiber. And thus they say this laxity is removed; by the condensing effect which they are susceptible of producing. Dr Cullen is inclined to reject, the theories by which astringents where formerly explained, and adopts one, which he concieves to be more correct. He observes animal fibers which

are considered as composed of solid earthy particles, adhereing together in a line by means of gluten, composed of water and oil (se Borehaave) now with regard to increasing the cohesion of the fibers; it may be supposed to depend on the proximity of these particles. If then we insinuate, between each particle another of the same kind, we increase the cohesion of the fiber; and in this manner have astringents been supposed to act. This theory is very properly expunged by Dr Cullen. He mentions the fact of spirits of wine coagulating the white of eggs; and appears to reason on it, as he would on the solids of the living body; he thinks it does not act upon it as some have said by the interposition of particles of another, or the same

kind, on the insersion of the particles of the spirits of wine, between those of the albumen. and so attracting them to each other; as some have explained it. But he thinks it is more probable, that the spirits of wine attracts the water of the animal matter, and so the solid parts run together. Were we to admit this theory as it respects inanimate fluids out of the body; should we have a solution of the difficulty clearly explaining the most probable manner in which this class of medicines act upon a living organized body: Dr Cullen considers as I observed before astringents to act upon the simple solid; and also upon the living solid. and as we consider the action of the former not to be connected with the living body, but on dead animal matter; we conceive it

will be unnecessary, to enter minutely into the consideration of it: inasmuch, as all substences must produce there effects through the medium of the nerves, upon the sensorium commune; and it would be a difficult matter to conceive, of the operation of a medecine, upon the parts mechanically without taking into consideration, the laws which govern the animal body. When an animal is dead, he is no longer under these laws, he is governed by a set, which is in direct opposition to those we have mentioned. In this state we contend; that it is possible for the class of substences denominated astringents; to act upon the simple solid, but before this takes place we cannot conceive of it; inasmuch as the animal matter, is supplied with its

nervous energy, and in order for this effect to be produced, it would make it necessary that this nervous energy be destroyed, in order that astringents, should act upon the simple solid. We will therefore consider them to act upon the nervous system; So changeing or altering the condition of the solid parts of the system; and thus producing there beneficial effects. Their impression is converged, to the sensorium commune, this causes it to generate a supply of nervous energy, which is imparted to those solids, which labour under this diseased condition. But we do not mean, that the diseased parts receive this nervous power exclusively, but that in conjunction, with other parts of the system, they receive there proportion

ate quantity. And in this manner we conceive, that the various parts of the system, are changed, in there condition when labouring under disease; for the deficiency of that power, which is necessary to enable them, to performe, there healthy functions. In this view of the subject, we have not taken into consideration, the various morbid actions which the different parts of the system, are subject to, or the manner in which the various medicines act, in the cure of those diseases. Time would not permit to enter into minute details, concerning the great variety of medicines, and the manner in which they produce there sensable effects upon the system, but suffice it to say, that they all

act, with very few exceptions on the sensorium commune, and there effects are communicated to the other organs, through the medium of the nervous system. A difference is made between those medicines, which act by communicating tone, or in a gradual manner, and those, whose effects pass of speedily. The former has been called tonics, the latter diffusible stimulents, or narcotics. The tonics act in a more slow, and durable manner, they do increase the force of the circulation, but they do it in a less degree, though it continues preternaturally increased, for a longer time; then when produced by diffusible stimulents, the latter produce there effects in a shorter time. they produce a high

degree of arterial action, though it is succeeded by a proportional degree of langour. The former are fitted for producing more lasting effects; the latter from there diffusibility and speedy action, on the arterial system, are better calculated, for treating diseases which depend on nervous irritation &c. Another important difference between stimulents may be made, between those which act upon the general system, and those which act upon particular organs, which act imperceptibly on the stomach, and without producing any excitement, which can be observed by the pulse. Their operation is directed to some particular organ; by an inexplicable disposition which they appears to have, to act upon

it. Hence we have the various termes; emetics cathartics; Diaphoretics; Diuretics &c, These medicines do not act invaribly as their names import, But under various circumstances the operation of the medecine may be changed, as for instance a diaphoretic medecine, may produce diuresis; by exposure to a cool atmosphere, or the reverse. A cathartic medecine may produce emesis, by an increase in quantity, if it be of a particular kind, or an emetic catharsis. A disquisition has arisen among medical men, concerning the action of medecine in general. Some contending that it is absorbed and taken into the circulating mass; whilst others believe it to produce its effects, simply by its action upon the nervous system.

The former appears to be much the most ancient theory of the two. The ancients were under the impression, that the good effects of mercury, resulted from the momentum of its particles, against the sides of the vessles, after it had been reduced, and minutely divided by the digestive organs; and passed through the lacteals and thoracic duct. The discovery of the circulation, about the middle of the seventeenth century, led to the application of mechanical principles, in explaining the animal phenomena. The theory of Obstruction corresponded, with this hypothesis, and mercury was conceived to remove those affections, by the force with which it impinged upon the resisting particles of peccant matter;

which it meets with, either in the large bloodvessels, or there capillary ramifications; when these particles were determined to the intestinal canal, and operated as purgatives, they were considered as expelling the morbid matter accumulated, in these passages, and when to the glands, the salivary; in particular, they were supposed to carry with them, the poisonous substences which had been retained in the system. While passing through the small vessels, they were believed to attenuate, the tough viscid lymph; and other constituents of the mass of fluids: to force through obstructing matters, contained in the vessels, by an impulse proportionate to the weight of the particles of mercury, and thus to promote a freer

circulation, and the removal of disease.
It was contended by another set of physicians, that mercury acted as a specific, upon certain morbific matters, in the system, combined with them, and thus expelled them from it. This opinion would appear still more unphilosophical than the first, and having been assumed, as a cloak for the ignorance of its advocates, it has been rejected by a more enlightened theory. Physicians of the present day, recognise no specific medecines, and are willing to keep open the door of investigation on such subjects as are unexplained; by acknowledging their want of information and exciteing an inquiry into the more obstruse, and unexplored regions of medical science. That mercury is a stimulent, we expect none will deny.

And that some of its most important effects, in the cure of disease, must be attributed to this species of action, on the system. But that its beneficial results can be explained from the circumstance of its being absorbed by the lacteals, and carried into the thoracic duct, and from thence into the circulating mass; we do not feel inclined to admit: as experiments show that the fluid, which has undergone the action of the gastric juice, is changed into an highly elaborated fluid, and not as some have supposed a crude mass, when it comes in contact with the mouths of the absorbent vessels. This fluid is said by Dr Chapman of Philadelphia, most probably to have all the properties of Blood, except

the red colour. He resolves it into three parts. There is says he, on portion of cyle which preserves its fluidity during life, but coagulates after death by exposure to air, and is probably fibrine. There is a seccond, portion of cyle which resembles serum, in continuing fluid when exposed to the atmosphere, and in coagulating at the degree of temperature, as serum. There is a third, consisting of globules, simelar to those of the blood, with this difference only that they are more minute. It is our decided opinion, that what ever substence enters the circulation, must undergo those changes, which cannot fail to destroy their medicinal charactes, and thus prevent them from acting as extranious substences; which would when received into the circulation,

be deleterious to the animal system. as for for the great variety of substences, which we can detect in the ~~blood~~ secretions of animals, we must conclude that as they cannot be detected in the serum of the blood, that they are new combinations, formed by the elements of those substences, comeing into contact and recombeneing, and forming, those substences which had previously excsted in the stomach, prior to the gastric juice upon them: and not as some would express it, that these substences are absorbed or taken up by the lacteals. Whatever substences, we repeat it again enters the circulating mass of fluids, must have undergon the action, of the organs of digestion and assimilation, in order that they might be converted into aliment, fit for the nutrition of animals. Hence we observe in different parts of the body those glands, which are

formed, by the convolution of lymphatic vessels, acting as centinels to prevent any substence from entering the system, which might prove injurious, or distructive to the animal; hence if venerial virus be applied to a secreting surface, until it excites the action of the absorbents by its acrid properties, we shall have a chancer as the consequence. The absorbents take up the virus, and carry it to the glands; and they do not permit any to pass them ~~in~~ but it excites inflamation. It is imposible that this virus should enter the bloodvessels in the forme of a poison; if any of it is recieved into them, its properties must be changed; from a virus it must be converted into an article of nutriment; before it can possibly get into the circulation. What deleterious effects are

produced by a very small quantity of bland fluid being injected, into the bloodvessels if a little oil, or milk, will produce these effects, what shall we say to venereal virus; or the preperations of mercury getting into the bloodvessels, without producing certain destruction. There are many difficulties to prevent or impede our discoveries after truth, more especially as it relates to the development of those laws, by which the animal economy is governed. As well as the necessity, of avoiding error in conducting experiments to ascertain this desireable object: notwithstanding the multiplicity of opinions, entertained by men of science concerning the manner in which mercury, produces its effect upon the system; there are many which are unsatisfactory or unfounded; explained altogether on mechanical principles, and which do not

comport, with just views of the principles by which the animal system is governed. We should deem it a work of supererogation, to detail the various theories which have been entertained respecting the manner, in which Mercury produces its effects upon the system. Dr Cullen believed mercury, to have a particular disposition to act upon the salivary glands, in consequence of the attraction which it said to have, for ammoniacle salts, which the saliva contains. but this particular disposition is not to be observed with respect to the saliva any more than other fluids, which contain them, and the saliva does not contain them in greater abundence than other fluids. Dr Murray gives an explanation, of the cause of the action of mercury on the salivary glands, according to his views of the subject as follows. The urine more particularly designed to convey matter which has been received into the circulating mass, but which is still excrementitious from the system. To pass however with this fluid, it is necessary that the matter ~~matter~~ conveyed, should

be soluble in it, and when it is so, we can discover it in the secretion by chemical tests. If there is any property connected with it, therefore, which shall prevent this solubility, it probably will prevent the substence from being secreted. Now the phosphoric acid, abundent in urine, must in this mode counteract the secretion of mercury in any form of preperation, by forming with it a compound insoluble, and to which the slight excess of acid cannot communicate solubility. The mercury, therefore existing in the circulating ~~fluids~~ mass, when brought in the course of the circulation, to the secreting vessels of the kidnies, will not pass through there whole course, but if conveyed so far as to be combined with phosphoric acid, will from this combination be incapable of being conveyed onwards, and will therefore be retained in the composition of that part of the blood which does not enter into the secretion, but returns into the circulation. It must be discharged by some other emunctory: a portion of it appears, from some facts, to pass of by insensible perspiration, but

the tenuity of this secretion, if the term may be employed, must be unfavourable to this mode of discharge. The salivary secretion is one by which it may be more easely transmitted; and this transmission may even be facilitated by the affinity exerted ~~on~~ to the oxid of mercury by the muriatic acid, the soda and ammonia, which are the chief saline ingredients in saliva; for it deserves to be remarked, that triple compounds of these substences — a soda muriate, and ammoniaco muriate of mercury, are to a certain extent soluble in water; and if the mercury is thus secreted, it will of course stimulate the secreting vessels through which it pases, and increase the discharge.

This theory of the action of mercury on the system; does not accord with the views we have taken of the subject; and it may be considered unnecissary to enter more fuelly upon it: an apology for not giving a better one can not be necessary. And we conceive it better to be candid and acknowlededge our want of information on the subject; than to attempt a hypothetical explanation, which could not be attended with any advantage; but which might involve us in a laberinth of difficulties.

Before I conclude this essay, permit me to tender my sincere acknowledgments to the medical Professors; for the superior benefits which I have received, from their invaluable lectures. As well as for the tokens of friendship they have manifested towards me. May they long live to reap, the advantages of those labours, which they have, by their industry, succeeded in disseminateing among mankind.

1819

Conamen Inaugurale

De Mania;

sive mentis aberratione,

Præcipue de mania illa "Religiosorum" specie dicta.

Quem annuente Summo Numine,

Viro R. Reverendo Jacobo Kemp, D.D. Præfectus,

Gubernatoresque Academiæ

Necnon Excellentissimæ Medicæ Facultatis

Examini quorum eruditi,

Davidus Meredith Rose, Civis Terræ Mariæ

Facultatis Medicæ & Chirurgicæ

et Societatis Medicæ

socius,

Subjecit.

Favete, adeste æquo animo et rem cognoscite ut pernoscatis equid spei sit religuium spectandæ an exigendæ sint vobis prius.

Terentius.

Joanni D. Davidge A. M. M. D.
Artis incidendi Terræ in Academia Mariæ
Professor,
Hanc tentationem
Pro ingenio præcellentissimo
Peritiaque medica sua
Venerationis,
votum et publicum
Addictus gratus alumnus
Dat, dicat, consecrat,
Auctor.

Samuelo Baker, M.D.
Materiæ Medicæ in Academia Terræ Mariæ
Professor
Hoc opusculum
Suis pro beneficiis ac erga eum bonis
Perinde ac
Reverentiæ ut Testimonium
offert
Auctor.

Jacobo Bain, M.D.

Tibi hanc non consuete apellam ipsius causa sequentis, neque mihi est gratiam captare votum dicando, sed aperte pet animum in tuis ad me monitis gratum ac beneficiis dum studiosi a me officia exsoluta fuerint afferre possim.

Hoc tunc accipe, in debili, tametsi animi sincero testimonio pergrati abs

Discipulo Amante tuo

J. McLaren.

Proëmium.

Legibus hujus ut Academiæ morigerer est de aliquo mihi scribere opus. Gravium sed tanta rerum varietas, omnes ad perscrutationem patentes mihi apparuit, imo conspectus tam magnus paletque vastus, sane multum de quo disceptarus sim dubitavi. De rebus theoreticis vanorum mole piaculorum quæ nunc etiam scientiam obumbrant conamen facere obsistabar. De re practica quidem est desiderium mihi incipere bene nam putatum est illum magis hominibus meruit cui maximam negotiorum practicorum notitiam est.

Errores in verbis meas seu in re, quas hocce in libello comperisse adjuventutem ac inexperientiam adscriptum sit spero. His perpendentibus eos obsisti optem qui manibus rudis adstant omnibus temporibus paratos scientiæ teneros

decerpsere virgultos quia non habent fructus quum flores adesse solas possint.

De Mania.

Dissertationis in hujus ostio mihi plane multa ardua videntur, magnitudinis recordatione ejus tamen, atque multarum sententiarum super de ea tradita fictarum meipsum operi dare, non sine illarum spe corrigendi, adductus sum.

Ea haud minus sacra principiis opposita religionis, Deo recluso, quam claris communi sensus excogitationibus fuerunt; atque profanus tametsi malum de quo nobis actum est perualidum contra spem Christianam argumentum putat esse, seu adjumento si ad rationem effugiet conamina mala oppugnare sententiam contrariam ad sanam rationem probareque conabimur.

Mentem seipsam morbi capacem posse sententiam est haud receptam ratione; quicquid morbi capax pariter mortis capax est perbene scitum. Hoc nemo denegare poterit. Leges rebus materia constantibus proprie quæ atque iis sine materia constantibus insunt, toto cœlo distent; una morteque morbo altera nec morbo neque morte cedat. Porro die in diem de mentis morbis Medicos scribere videmur; stolitia dignum est et enim Medicum Rushium, quam eum principia erga neminem fuit amiciorem religionis reclusi morbis de mentis scripsisse; quem omnibus late patet eum non mentem sedem esse morborum putare utpote medicamenta sua omnia immediate vel mediate cerebro et systemate nervoso adplicentur. Mihi equidem pari ratione veritati con-

-sentaneum ac facile intellectu de mentis morbis alloqui videtur æque ac de materie immateria seu vice versa dicamur. Ejusmodi verba sane sententiæ immortalitatis æqualiter animæ immaterialitatis ~~[illegible]~~ obsint.

Pro principio concessum sit;
Quicquid morbi capax est ex materie constat,
Mens morbi est capax,
Ergo, ex materie mens constat.

Quantillum nobis syllogisma supra-dictum existimetur dubii nihil est dum qualibus utimur sermonibus (principiis cedentibus) consectarium sequatur.

Nunc est quærendum,
1mo Quomodo morbus Religiosorum mania dicta ortus esse.
2do De medendi modo insanorum optimo omnium

I. Principia Religionis et acta illo in modo sanæ mentis mutuo pugnare cum rationibus nil refutatione dignum est. Religionis ingenium contra mentem insanam stat, imo vero causæ morbum quæ sua potestate inducant in salutaribus versi sunt. Amoris qui in spebus sive illo negotio ingente pefellerint ad eos quum non est illis illum quam mortalem adjumentum mania perveniat. Cultores sed Religi-onis sua est quibus oblectamina his perarduis rebus quia suppetit sperum pons illis sistere possint ad quem nil terrestre pertingat. Sic nobis audacis religionem exprobationis va-cuam mania causandi existimare licet.

Notum est porro alios propter mentes graviter vexatas cruciatasque po-

testate religionis excitata spe salutionis abrepta insanire. Hoc magis facile contrariam probat quam abnegat. Christi regulas proprias indigitat esse. Mihi quinetiam creditum est et defensione dignum omnes maniæ casus quos factos fuisse aut facturos esse, (nisi a corporis structura exorta sunt) solo in uno alterove modo allaturos esse. Errore sine quando maniæ religiosis affectionibus nexa est eas enthusiasticas seu falsas vocare oportet; hinc Rushius inquit hominem insanæ mentis recte dijudicat quum se Deum offendisse credit sed haud recte ratus est quum Deum se a misericordia sua clusisse putat

Duæ religiosis Hyppochondriasis causæ a Rushio dictæ sunt, scilicet,

1mo Aeger se a misericordia divinita Dei judicio immutabili exclusum esse putat.
2de Se crimen non absolvendum factum esse credit. Priorearum frequentius.

Qui mente usus religionem pro his casibus maniæ inculpet? Omnium sententiarum consilium suarumque preceptorum ab maximo causarum maniæ numero est defendere, denique etiam errores atque ineptiæ supradicta minus facile maniam quam amor ac multa communia atque necessaria negotia vitæ educant. Mollitia perdignum est quum morbum Religionis potestate superinductum fuit mentis aberrationem anteriorem observandum est; porro non est mihi opportunitas melior religionem ab hac exprobatione

vindicandi, quam verba Samuelis Tuke citando.

Maniæ de causis illo loquente ait "perdifficile est notitiam rectam de hac re obtinere. Cupedia seu ægri amicorum negligentia obsistentiam effecit, atque quum hi non adsunt, ac quodcunque morbi causam putatur libere dictum est, frequenter accidit causam putatam verè nil est nisi primam actam improbam attentione dignam.

Multi ex numero eorum qui in nosocomio pro* recepti fuerunt, morbum ad alium animi motum pervalidum attributum esse. Menti humanæ non est incertitudinis amor

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*The "Retreat," near York, England.

quare ægrotorum amici illam rem pro causa habere volunt.

Morbum si dicere naturalem sive ex habita velimus, spe abrepta ac superbium ac amor æque ab hac sententia resiliunt. Multis in casibus tamen quibus causa distincte data accuratius rerum examen tamque actorum ægri priorum nos alterum ad terminum deduxerunt multum discrepantem ab iis, qui amicis magis amantibus sed minus quærentibus efformantur. Omnibus perdifficile est de hoc recte admoneri cognitum, quia vel propter cupediam ægroti amicorum vel negligentiam multa difficilia orta sunt. His si non existentibus ac causæ quum liberaliter ab amicis data sunt, sine

errore frequenter sese falli putatum sit. Denique causam dictam ferme esse primum mentis aberratæ actum se ipsum observatione vindicantem.

Mali quum adventus adfuturus animi alacritas viget et motus celeriores fiunt. Hæc brevi tempore effrænatæ sunt, sed mens hoc casu seipsa locos tranquillos proprios ac ad suam quietem effugere videtur. Animi excitationes horum inconsulte aliquo adhærere conducunt; ac hac causante frustratio insequitur, atque malum plane ostendunt. Multi tum temerè in rebus mercatoribus agunt, dum alii de religione mentes exercitant. Manicæ hinc de orlug: causis dubium persequitur.

Eorum ex numero panci qui in Nosocomion: supradictum incolebant,

primo ortu affectionibus religiosis adnecti fuerunt; atque ferme omnes quas tu propric facto eas infelices casus, non a causa extrinsica sed sua sponte ortos fuisse. Eos denique seipsis alia signa antecedentia seu comitantia mania advenientis habere.

Scepticos improbos ac ignaros propter eorum egestatem casuum ab hac causa orientium taceri oportet. Ex numero quinquaginta in Nosocomii Pennsylvaniensis Rushio testante, dixit quinque ex sententiis religionis falsis orti sunt ac ex CXLIX casibus in Nosocomio Eboraci, (Ang.) nobis Samuelo Tuke dictum est tres tantum qui ullo in modo ad hanc speciem spectant, porro cogitatione dignum est ex iis duo curantur, ac alter melior evadit.

Infidelitas seu ADELOque (ait Rushius) causæ in regionibus Christianis frequentos communesque sunt. Nil nobis dubii est de ejus veritate sententiæ nam frequentiores valdè quàm ii qui a Religione vera oriri videntur. Modo in hoc tantum nobis veri de suicidibus licet eorum numerus longe frequentior erit si Religionis principia abfuere. Scriptor idem de his dixit suicidos naturaliter parvos maniæ gradus quum non iis sunt bonos mores Religione ducente ac alteræ vitæ non creditum futuræ insecutos fuerit.

Maniæ Religiosæ causæ præcipuæ, inquit Rushius, hocce in modo aggrageturi, scilicet,

1.mo Visiones, insomnia, revelationes quorum omnes vanas putantur.

2do Conscientia malo onerata sive vera sive putata, frequentior quam altera eam producet.

3tio Spe divinitè misericordiæ abrepta à causis antequam dictis i.e. creditum sententia fati irreversi seu se malum non absolvendum factum est putare.

4to Morbus ortum est à ægri sententia [redacted] se filium cœli amatum ac destinatum voluntatem ejus fieri perbenevolum esse.

His datis pro hujus morbi speciei causis tantum late omnibus patet religionis vera non culpari decet: atque ac eos casus quos ab suis erroribus orientibus ferme lenes sunt ac curæ faciles. Hujus rei Rushius tam bene cognovit atque Manicæ nomen relinquitque ipsum

vocavit "Religious Hypochondriasm, or partial derangement;" hoc dicendi modo eos casus valde lenes ingressu etiam curae perfaciles.

II. Maniae curandi generaliter modus.

Morbo ad cerebrum et systema nervosum pertinente medicamina ea quae in eos agunt mediatè seu immediatè magis ad lavandum morbi propria sunt.

1mo De his qui corpori adplicentur.

Inter haec quae corpori adhibita sunt de sanguinis missione primum tractandum. Antiquissimo ab avo commendata ac sine dubio utilisque necessaria sed non frequenter usa est. Maniae aliquando hemorrhagiis seu sanguinis fluxibus forte venientibus curantur: hoc factum solum probare hunc medendi modum rectum esse possit.

Emetica, Cathartica que usa multis casibus rectique fuerint. Nemo regulas omnibus aptas dare poterint. Quomodo-cunque causa aut mutant aut symptomata, medendi modum necessaria mutandum esse. Sic Medicum suo judicio solo dirigi oportet. Multis ab Medicis laudes Calomelani data sunt sed Med.o Ferriar suis casibus nobis rationes datus est, altero modo credere.

Opium, Digitalis, Stramonium multa alii similes commendantur. Epispastici utiles sunt, sed meo judicio sanguis mittendus est antequam usi sunt. Balnea tepida et frigida utuntur, mihi tamen dubiosa videntur.

2.do De his, qui in mente agunt.

Mentem tametsi non credere morbi primam sedem esse possim, nexus tam arctus est inter corpus et non sine, mentis motu corpus tangere possimus. Tempore ab antiquissimo, ligamina vincula aliaque similia nos fuit imponere. Denique nunc etiam multis locis utuntur. Panas iis manicis feras ac diras alii putant esse restringere. Religio tandem sua mitis lenis benignaque eos super sceptrum lavavit effugit crudelitas ac vincula è manibus, Religione jubente abrepta fuere. Hoc agente nobis non tanta est timor quum amicum lapsum ad insanorum domum mittimus. Flagella vincula non tantum suo aspectu relicta sunt custodibus insanorum, porro cubicula magna et ventilata, omnibus beneficiis ludis et

æris dedita pro atris carceribus data est. His largiter omnibus insanorum domus Anglice dicta "Retreat" magna cum admiratione usus est.

Nobis dictum est,* viris auctoritate plenissima vestitis eas insanorum domus miserabili faditate savitia ac negligentia gubernavisse; tamen hæ inter Anglia populos frequenter facta fuerunt donec ad cælo exclamaverunt, ac nescio utrum mutaverint unguam nisi a Religionis potestate. Hac nobis mitem et benevolam gubernationem mutta bona efficere possit indigitata est.

Sodalitas Amicorum (Ang. dicta Friends or Quakers) gratias ab omnibus meruit fuit illis primum insanorum casum jurare fuit illis maniacis obesse, atque omnibus rationem dare ubi est

* No. 56, Edinburgh Review

Definition.

Cephalalgia. Derived from the Greek words Algos. Pain and Cephale the head, is the technical term for head ache, by some authors Cephalalgia is used to signify a recent or slight affection or one that is confined to a particular part of the head, and they use the word Cephalea to denote the disease in its more chronic or obstinate form, or when the whole head is affected, but these distinctions are now generally laid aside and the two terms used synonymously.

Varieties. When the pain in the head is attended with sickness of the stomack and sometimes with vomiting it is termed sick headache.

When it arises in low, weak and debilitated habits it is called nervous or asthenic headache,

When the pain of the head ~~[illegible]~~ returns at stated periods and has intervals of ease it is called Periodical or intermitting headache, and as this form of the disease frequently affects one side of the head only, it has been termed Hemicrania, and when the disease occurs in Hysterical females, and the pain confined to a particular part

part of the head, and attended with the sensation as if a nail had been driven in the head; it is denominated Clavus Hystericus.

uses. There is scarcely one febrile disease as well as many others of a chronic nature in which headache is not a symptom &c. so much so, that Doctr. Cullen has not given it a place among the Genera of diseases in his system of Nosology. But notwithstanding it is in a majority of cases symptomatic of other diseases, it is frequently the concomitant of some morbid state, either of the integuments or contents of the skull. Acute and deep seated pain is one of the most manifest symptoms of inflammation of the brain or membranes, which is called Phrenitis, as well in its common acceptation as in that form of the disease which terminates in a deposition of water in the ventricles of the brain, known by the name of Hydrocephalus Internus. It accompanies the various organic affections of the brain. Thus after death which had been preceded by severe pain of the head, there has been found tumours and abscesses seated in or adhering to the substance of the brain, the membranes thickened the arteries ossified, bony projections and effusion of serum or blood pressing

upon

upon the substance of the brain. Pain in the head also precedes apoplectic affections by pressure upon the brain, occasioned by the fullness, or the subsequent rupture of some of the blood vessels. Further there is a species of headache in which the morbid condition is limited to the integuments in consequence of a Rheumatic affection, which is the cause of a tedious and distressing headache.

Syphilis also when it becomes constitutional is very apt to give rise to a peculiar inflammation of the Pericranium and sometimes of the brain itself, which excites a very severe headache attended with a soreness of the integuments.

But the most frequent causes of headache are those which arise from the sympathy of the brain with other organs. The sympathies which exist between the brain and other organs are very numerous, but one of the strongest is that well known sympathy of the alimentary canal and particularly the stomack, Thus almost every derangement of the alimentary canal is attended with headache, and hence arises that species of the disease which is denominated sick headache. Doctr Fothergill says this disease is found most commonly among the higher ranks of

society.

The Patient awakes in the morning with a Pain in the head, which is confined for the most part to a particular region of the head, most commonly the forehead; sometimes it is limited over one or both eyes, sometimes to the superior part of the Parietal bone of one side only, and not unfrequently the backpart of the head is the Seat of the disease, it frequently changes, attacking one part then suddenly subsiding in that part and seizing upon another, with this Pain of the head the Patient suffers a considerable degree of sickness, which is sometimes sufficient to produce vomiting without artificial assistance. When this variety of the disease comes on in the morning as it usually does and before any food has been taken by the Patient seldom any thing is ejected but Phlegm except there be a considerable degree of straining, and then there is generally some bitter or acid bile thrown up, When this takes place the violence of the disease suffers a considerable abatement, leaving the Patient in a relaxed and weakened state with a general uneasiness which induces him to seek repose, and after a short sleep he perfectly recovers with the exception of some degree of debility produced by his sufferings.

The

The time which a paroxysm of this kind lasts is different in different persons, in some it ceases in two or three hours, in others it lasts twenty four hours or more, and with a degree of violence hardly to be endured, the least noise or light appearing greatly to aggravate the Patient's sufferings. This variety of head ache occurs in almost every habit and complexion, but it principally attacks persons in the early and middle stages of life, and among the middle and higher ranks of society. Those who take but little exercise, and are inattentive to the kind of food they make use of, both as regards the quality and quantity.

That species of headache called the nervous headache, Doctr Millan remarks, occurs exclusive of any particular febrile disease, from great fatigue, sorrow, watching and variable weather, It is attended with whiteness of the tongue and a sensation of languor and debility, when the pulse in this variety of the disease is sharp and quick, it is said to be attended with an acute pain through the head, and throbbing of the temples, when the pulse is slow and full, the pain is dull and heavy, sometimes attended with a sense of giddiness around the head, at other times the pain is confined to the nape of the neck.

That

That variety of the disease, denominated Periodical headache, is generally supposed (and I believe correctly) to arise from the same causes that give rise to intermittent fevers, namely, Marsh effluvia. mptoms. Having enumerated the principal symptoms of the disease under the head of causes, I shall only consider here those symptoms which characterise the different species of the disease. It is often extremely difficult especially at the commencement of the disease to determine the nature of the cause which produces it, When however it arises from inflammation of the brain it is readily known by the acute fever, quick and hard pulse, intolerance of light, delirium, and other symptoms of Phrenitis, and when these symptoms occur in children a termination in Hydrocephalus Internus may generally be anticipated.

If persons exhibiting marks of Plethora should be attacked with pain of the head and at the same time should be affected with drowsiness, ~~and~~ partial loss of memory &c. there would be no doubt but that the pain of the head depended upon the fullness of the vessels of the brain. When symptoms of Lues Venerea or Rheumatism in other parts of the body precede or accompany the headache, it may safely be pronounced Syphilitic or Rheumatic, sometimes it

it is not only difficult but almost impossible to determine what the internal organic cause is, where situated or whether it arises from sympathy with other organs, the state of the system in general, the duration and obstinacy of the pain being the only sources from whence we can derive any information respecting its organic origin.

The varieties which are more particularly the consideration of this essay, are not so difficult to discover. The absence of the diagnostic symptoms just enumerated, the manifest condition of the functions of the alimentary canal, the known circumstances as to irregularities of diet, which may have preceded the attack and the manner, seat and time of its occurrence, as already enumerated under the head of causes, will show it to be that variety of the disease, denominated sick headache. If there should be any general debility, low spirits, tumors and oppression about the præcordia, and more especially if watching, grief, fatigue or other debilitating causes have been acting, the variety of the disease called asthenic headache may be presumed to exist.

If the pain of the head should observe the intermitting form and at the same time the subject of the disease should be exposed to marsh effluvia,

we might safely conclude it to be a Periodical head ache. If the disease should occur in Females subject to Hysterical affections and the pain confined to a particular part of the head attended with the sensation as if a nail was driven in the head it should be considered that variety, called Clavus Hystericus.

Treatment. When we have considered and investigated the foregoing circumstances, the method of cure will readily suggest itself. If the conclusion as to the origin of the disease be satisfactory. If the symptoms should be such as we find in Phrenitis, which have already been detailed the plan of treatment proper to that disease must be resorted to. It is scarcely necessary to observe that if pain of the head should arise in consequence of Rheumatism or Syphilis, the remedies made use of in other forms of those diseases, would likewise be proper in this form of the disease. If the affection of the head should arise in consequence of the sudden suppression of any long accustomed evacuation, such as Hemorhoids, Ulcers &c. They should be again established or artificials drains substituted, and if the disease should be the consequence of the omission of

of Habitual bloodletting, venesection should be resorted to. The disease sometimes arises in consequence of the retention or suppression of the catemenia, and if so the treatment proper to these affections must be practised.

If from existing symptoms there should be reason to believe that some organic affection exists, the nature and site of which cannot be determined, the treatment it is evident can only be pursued on general principles, Therefore on the supposition that some morbid enlargement is taking place in some part of the Brain, the force of the circulation should be lessened by the local detraction of blood, and after a sufficient quantity has been taken away, the application of a blister would be necessary, and a course of Mercury instituted with a view to give activity to the absorbents, consequently preventing or diminishing any preternatural growth or enlargement.

The state of the bowels should likewise be attended to and kept regularly open, and every thing which would have a tendency to increase the circulation, whether stimulating drinks or corporeal exertion should be carefully avoided.

The sick headache arising from a disordered state of the alimentary canal occasioned by

by irregularity of diet, may be readily ~~to~~ removed by a gentle emetic or cathartic, but the disease will soon return if the causes be not avoided. There are some Persons who have so little self command, and indulge themselves so much in the gratification of their appetites that they pass a great part of their lives in the constant succession of such attacks, Notwithstanding this, the powers of digestion may be assisted by the use of Tonicks and bitters, and the rerno a of the food may be in some degree avoided by the occasional use of aperients.

But as Doctr Fothergill very justly remarks, whatever process the Judgement of the Physician may lead him to adopt, there is one object to be attended to, and will likewise require the attention of the Patient, This disease is not produced by a sudden incidental cause, but the long and repeated irregularities of diet and conduct altering the quality of the juices concerned in digestion and probably injuring the organs themselves, consequently requiring a long and steady perseverance in the use of those medicines which experience has proven to be most likely to remove the disease, But the object is not to be accomplished immediately,

it requires a Patient observance of regimen both as respects diet and medicine, therefore the Patient should be put upon a Proper course of medicine, such as will strengthen digestion, namely, The Preparations of Iron, mineral waters and other tonick medicines; They should be continued without disgust for weeks and repeated at Proper intervals untill digestion is Properly performed and the bile secreted and discharged as health requires. There is another part of our assistance, Doctr Fothergill remarks which is not less necessary than medicine to accomplish a cure, which is perhaps too much neglected both by Physician and Patient and if, says he, I have accomplished the removal of such complaints where Prescriptions of a very judicious nature had been employed without effect, it has been by regulating more minutely the Patient's manner of living, than by any medicines of superior efficacy, We frequently in chronic affections, rely too much on the Materia medica, and think it sufficient to Prescribe those articles of known use in similar cases, but unless the dietic plan both in kind and quantity is made to conspire with medical Prescriptions, the benefits arising from thence are hourly annihilated by neglect or indulgence,

It is difficult to Point out the articles of food for different Persons, since what are injurious to

one

constitution, may be taken in abundance by another with impunity, Individual experience if carefully attended to, will generally be sufficient to point out the proper kind of food. There are however, certain articles of food which if only taken in small quantities will readily excite the sick headache in some constitutions, such as butter butter, fat meats & spices.

Probably one of the most frequent causes of this disease is overloading the Stomach, therefore excess in eating and drinking should be studiously avoided by those who are subject to this variety of the disease.

The Asthenic headache accasioned by fatigue, and other debilitating causes, may be soothed by anodyne Medicines, and ultimately relieved by the use of Peruvian bark and other stomachic bitters that will have a tendency to give tone and vigour to the stomach, consequently to the whole system, and if the sensation of langour and debility be very great accompanied with accasional giddiness and dimness of sight, the Preparations of ammonia may be administered with advantage.

The Patient's diet should be of the most nutritive kind, and taken in such a way as not to overload the stomach, he should likewise take moderate exercise

The treatment of the Periodical Headache does not ~~does not~~ differ from intermittent fevers, after the use of bloodletting and cathartics, regulated according to the degree of excitement; Bark, Opium, Camphor, Fowler's Solution of arsenic and all the remedies used in other forms of Intermittents, will be proper in this form of the disease.

That variety of the disease which occurs in Hysterical females called Clavus Hystericus, should be treated with Castor, Valerian, Asafatida and Ether combined with exercise and whatever means would have a tendency to strengthen the general system.

Tubercular Phthisis Pulmonalis.

In treating a disease so universally fatal in its consequences, and which has so repeatedly baffled all attempts at cure, as consumption, we are apt to grasp eagerly at any remedy which presents itself, however plausible in hopes of meliorating the condition of the unfortunate sufferer. The investigations of science, though they have ascertained with certainty the precise nature of the disease, though they have pointed out the injurious consequences to which it leads have never been able to suggest a remedy for its cure.

The attention of physicians has been directed to this disease since medicine was first looked upon as a science. Many devoted to the investigation of its pathology a great part of their time, and amongst those of the moderns who has shed most light upon the subject, was the celebrated French physician Laennec. To this great genius are we indebted for the true pathology of the disease. It behold with regret this truly styled "opprobria medicorum" increasing daily throughout all parts of the

world "untamed untameable" spreading death and destruction wherever it invaded; and, invading only where its triumph would be most glorious, and determined to investigate the matter, and endeavour to better the condition of man. In doing which he has contributed much to this branch of science. By his instrument called the "Stethoscope" he has enabled to look into the inmost recesses of the breast of man and point out the true pathological state of the delicate organs which it contains. To distinguish between health and disease, and where this latter existed to show what was the nature and extent of the injury. But he has suggested no remedy upon which we can rely as a cure; nor has one been discovered since, and we are compelled at the present day to witness in silence its destructive ravages, and hope for the "Era" when the prediction of Rush shall be fulfilled. The subjects in whom this species of disease is most liable to be developed, are those of soft and delicate complexions "a pale, soft, flaccid

"and apparently stupid aspect of countenance" with a bluish circle around the mouth, and thick lips, light hair and blue or black eyes. This is what is called the scrofulous diathesis, and in such persons the liability to become affected by common catarrh or the slightest change in temperature is particularly great. The bowels are subject to frequent disorder, either too much constipated or tending to diarrhea. The appetite is generally very great sometimes though rarely depressed, together with other symptoms of scrofula.

The particular state of disease arising from this condition of the system is what is denominated "Tubercular Consumption". "This is a most fatal and unmanageable form of pulmonary consumption (Eberle). It commences with pain and tension across the chest, with a peculiarly dry and hacking cough easily excited by the slightest exertion. The patients breathing is short and quick and accompanied with pain and uneasiness throughout the chest. These symptoms increasing the patient becomes feverish, the expectoration taking place

generally in the evening and the pulse and respira=
=tion continue somewhat accelerated throughout the
whole day. A fit of coughing occurs first when the
patient arises of a morning which leaves him
in a "weak and relaxed condition". During the
exacerbations the pulse is "frequent, small,
quick and tense," and has a peculiar wiry
thrill. The palms of the hands and soles of
the feet have a dry burning sensation. There
is also on one or both cheeks a red circumseri=
=bed spot denominated the "hectic flush" always
a concomitant of this species of fever. The tongue
is "moist often clean and of a" pale pink co=
=lour or covered with a thin white fur. Sensi=
=bility to cold or damp air, torpidity of bowels.
A peculiar pearly whiteness of the albugineous coat of
the eye. These symptoms increase and after the fever
has continued for some time the patient falls
into a profuse perspiration, which, at the same
time that it dissipates the fever leaves the
patient "exhausted, languid & depressed".
The secretion which heretofore bore the charac=
=ter of pottey mucus now assumes the distinct

character of pus, being thicker, less viscid and of a more yellowish appearance and sometimes "streaked with blood". Shewing evidently the destruction of the soft and delicate texture of the lungs. As the disease all these symptoms increase, night sweats, fever &c. Diarrhoea supervenes in consequence of the loss of tone of the digestive organs, and our patient wastes gradually away, until death relieves him of his acute sufferings.

The remote cause of this disease is as of have stated before, a particular state of the system denominated the "strumous or scrofulous diathesis". The 2nd or exciting causes are those substances which by creating an irritation in parts already predisposed tend to develope diseased action. For it has been satisfactorily ascertained that in the absence of a sufficient exciting cause, some persons have lived to an old age and carried to their graves this disease still in the germ. The most common exciting cause of this disease is a slight catarrh from exposure to frequent vicissitudes of temperature thin clothing &c. "Diseases of the liver sometimes develop the disease where predisposition to it exists" as also

other organic diseases. The sudden drying up sores or drains from the system, which have been produced accidentally or have been instituted for some salu=
=tary purpose. Cutaneous diseases which from too great application of cold to the surface have been repelled frequently develop the disease. The inhala=
=tion into the lungs of fine particles of any foreign substance such as stone, glass, metals, &c. as is necess=
=arily the case with those persons whose occupations in life subject them to their influence is certain to produce the disease in constitutions already predisposed.

For the treatment of Tubercular consumption an innumerable variety of remedies have been at different times employed and recommended to the public, as calculated to eradicate entirely every vestige of disease. Of the success of these it is not necessary I should speak. Universal ex=
=perience has already shown it. The remedies which are most highly recommended at the present day are only palliatives, and indeed, so difficult of management is this form of disease, if not attended to in the incipient stage, that these have but

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each of these preparations is about the same about a dessert spoonfull to children above a year old and less for younger — A strong infusion of the dew or blackberry root is said by some to be useful — The Chalybeate preparations are also extensively employed by some practitioners the best of which agreeably to Professor Chapman is the super saturated sulphate of Iron — The following formula of this medicine may be given ℞ Sal. Martis, Gr. ii, Acid Sulph. dilut gtt x, Sacch. Alb. ʒi. Aq. Font ℥i. M — The dose is ʒi — But even in this stage of the disease calomel is serviceable when there are marks of hepatic congestion or want of bilious discharges or the presence of vitiated secretions — If it be proper to use the calomel the chalybeates must be laid aside and the bitter infusions may be given in their place —

Regimen

In the commencement of an attack of this disease the diet should consist entirely of the mothers or breast milk which is of such importance that a nurse might to be procured when the child has been weaned. It will of itself sometimes cure the disease unless nature is necessary even here, as the child from excessive thirst may demand the breast too frequently and thus overload its stomach. The child must not therefore be suffered to suck too much or too frequently. If thirst be importunate small quantities of cold water may be given repeatedly instead of the other drinking. If the child will not take the breast it may be fed on sweetened milk barley or rice water and milk mash mallows tea soda water and brown bread and water. In the days advancing stages the farinaceous articles

may be given such as arrow root Tapioca, Sago, rice, and boiled flour and if debility of the stomach and bowels exist and no fever being present we may allow some of the lightest and most digestable kinds of animal food

Prophylaxis

To avoid the injurious effects of high atmospheric temperature it is not only necessary to avoid (shun) its direct influence but children should be protected against all the vicissitudes of the weather which without great care become exciting causes Every thing that effects any unusual excitement or diminution of healthy action especially of the stomach in this critical state of predisposition gives an immediate developement to the disease — The skin of children should be kept clean that no

obstruction to insensible perspiration may take place. This object will be promoted by wearing flannel in summer — the effluvium generated about the persons or apartments of children should be allowed to accumulate — It will molest the respiration and contribute to invite disease by weakening the nerves — The connection between the skin and organs principally invaded by the disease is very intimate and therefore of great importance in the Prophylaxis — Before the symptoms are unfolded there is a manifest change in the capillary circulation — Under some pallor and perhaps some impairment of appetite the skin becomes relaxed and its power of contraction is diminished — In this state and at all times in warm weather and especially during the existence of a febrile disease children should be bathed in cold water daily — It removes the debility of heat giving tone to the capillaries and through them to the brain and whole sympathetic system —

Children should be carefully attended during sleep lest they become exposed by throwing off the bed clothes and to obviate the effects of such exposure when a cooler atmosphere in the morning would be more dangerous than ~~the~~ night dresses should cover their extremities — Children should not be weaned between the months of May and October nine tenths of those who are deprived of the breast in June and July suffer an attack of Cholera — Independant of the danger from this cause it is necessary — That the supply of milk should be sufficient the Mother should regulate her own regimen so that it can occasion no change in the secretion by which its quantity may affect the child's stomach — Children should be indulged with as much exercise as they can bear without fatigue, and this should be in the open air if it be practicable — While they are protected from the rays of the sun directly

or indirectly — The evenings and mornings should be chosen for this purpose, then precautions ~~should be~~ the tender system to maintain the irritation of another exciting cause to thing which so often intervenes under the unfolding operation of the remote cause that its influence cannot be evaded and it is sometimes inexorable by means purely medicinal — If during the progress ~~they~~ dentition the gums should be swollen and painfull in cipion offers a prospect though a feeble one of relief and should not be omitted — In many the remote cause furnishes ~~it~~ all the means of disease and dentition only follows in the train of other consequences — A removal to the country before or at the commencement of summer is a practice dictated by prudence because it is founded in general experience —

In attempting a short dissertation, on the disease known in modern nomenclature, as Bronchitis, it is deemed proper, at the Venial, to make some few preliminary observations; in this course, an illustration of the principles advanced or the doctrine suggested, is intended, on which correctitude can alone be tested. We remark in the outset, that pathological arrangement, in relation to this disease, from adoptations heretofore obtaining, has given rise to endless controversy; which circumstance unavoidably productive of confusion, uncertainty, error. To more modern discoveries is therefore attributable a reduction of vague and indistinct conjecture, to favourable illustrations; and satisfactory conclusions, in regard to the existence, locality, diagnostic character, treatment and cure of this prevalent and formidable

disease. The whole class of inflamatory derangement, from the denominations of tussis catarhus sevilis, peripneumonia notha, and other local affections of considerar form and character being scientifically and verry properly restred to Bronchitis, must of course facilitate any investigation of deranged affections of the Bronchial organs; which being the subject of the nicest discriminations of pathology will become more sucessfully ~~taught~~ skillfully ~~treated~~ understood. In this, as in all other branches of medical science, simplification and certain developement are to be unerringly found inseperably connected.

It may be proper in this place to remark, in reverence to indisputed principles, and matter of fact, that inflamation in the system

to obviate and remove the most serious impending calamities to the human constitution.

In conformity to our proposed order, we proceed to remark on subacute Bronchitis from diagnosis of its universal pathology. This form of disease known to ancient nosologist by name peripneumonia notha, is always attended with considerable febrile excitement; expectoration of mucous, viscid and purriform;- paroxysms of cough often violent-. vomiting in coughing fit; respiration, altho the patient may be able to take a full inspiration; is always accompanied with wheezing;- pulse hurried frequent and full, and a universal prevalence of great debility in the muscular system, in subjects of advanced age bronchial

ulcerations are most frequently present;
a peculiar characterizing symptom in this form
of bronchitis, is the expectoration of purulent mat-
-er of of a greenish color. This form of disease
is certainly traceable to cold and moisture in
equal degree, as it may be symptomatically allied
to inflamatory diathesis. All inflamation of the
bronchial membrane, as if resulting from the same
or similar causes, remote proximate or exciting, as
constitutionally affected may be correctly, as cons-
-tituting or forming a disease in unity or assim-
-lation of strict affinity, and relative type.
The cause or causes of ultimate or effectual
derangement, in any organ primary or subordin-
-ate may be in operation more tardy or swift
or hurried before the affectation is character

istically fixed and susceptibly determinate. Thus acute bronchial inflamation is rapid in its progress and resolution, rising to its highest activity in a few days; and a sub-acute form its progress is more tardy or greatly and evidently contem-porated, requiring as many weeks, when arrest-ained by practical administration, for arrival to an acme of danger, while chronic inflamation of the mucous membrane known as the location of the derangements under consideration, may be insiduously latent and imperceived for days or weeks or months; and in many cases when neglected in its most simple and incredulous symptoms and indications, may be constitut-ionally forming for years without suspicion or detection. The most important characteristic

mptoms in a pathological view of chronic bronchitis are of easy and certain discovery, explanation and detail; the symptoms though presenting great variety, may be contracted to such as may aid in developing such diagnosis, as can not fairly be mistaken in designation and medical practice. Frequency of pulsation will afford unerring testimony that febrile excitement exists in the constitution - pain in the head, which is inseparably concomitant with violent coughing; which often in ~~reference~~ to the violent paroxysm of the cough induces pain in the iliac region thus injuriously affecting the bowels - the attending cough is invariably excited by a deep inspiration of air, which of course excitement in the pulmonary organ adds violence and continuance to the paroxysm -

This effort causing great debility is instantly experienced difficulty of respiration is increased by bodily exertion and motion, not only in a horizontal position, but highly in ascending the cough in this disease is commonly present at lying down or rising from bed — at night and morning expos-ure to cold air, as it produces irritation & effect this membrane of the bronchia, expectoration from this cause varying in matter of appearance and the quantity discharged, will determine some of the most important points in practice. the matter discharged at one time is of thin consistence and small in quantity, at other times, of a mucilaginous or ropy or slimy consistency; the quantity is at once small in other cases astonishingly large:— The disease is always marked

with cold extremities, languor, the functions of the stomach and Bowels impaired, — oedema of the feet and legs, supervening in this disease, indicate a hurrying derangement taking place in the whole system of the abdominal Viscera —.

The principles of treatment and cure will necessarially vary with the multifarious appearances of Bronchitis, existing in the order or arrangement adopted. The antiphlogistic course is unquestionably of profound service in all cases of inflamation, and to the skill attention and foresight of <u>Practice</u> must be relied on the success of any attempt at amelioration moderation and cure. Blood letting is certainly all important in any acute form of the disease

and in almost every case, the quantity of Blood to be taken, as well as the necessary repetition, must be indicated to skill and judgement by the predominant characteristics of the case; in the different forms of bronchial derangement and inflammation, measures, therefore, must be taken with the greater or less activity, agreeably to the existing circumstances of particular cases, thus in some severe fits of cough, when of extraordinary continuance, intense pain of the head and in the region of the bowels bleeding will be necessarially indicated; and in many cases the disease may be at once overcome. Emetics in almost every form of Bronchitis will be found infinitely serviceable; and taking into consideration the importance of keeping the bowels properly regulated, administration is directed to prevent

costiveness; hence saline draughts, admixtures with cathartics, and diuretic medicines are found valuable in relieving cough and pectoral oppression. ammoniacum, myrrh, and acids are to be relied on: in some states of bronchial disease, narcotics and more especially opium, are indispensably useful. Effectual relief may be obtained in verry many instances of symtomatic distress, in the progress of disease from the exhibition of calomel, the tone of the stomach being impaired, gentle stimulants are to be resorted to, as restoratives; and also a judicious application of blistering remedies, exciting a reaction or more properly a contrary action will be found useful. The temperature of the system is all important to be noticed in this disease under any form, indications being drawn from the the heat, cold, dryness or moisture

of the system, and the treatment varying accordingly can alone insure ultimate success. It is advised that the Practitioner be attentive, vigilant — mark the progress of the disease which is subject in its course to endless changes; and marking with strictest accuracy these vicissitudes in the system of disease. observe with the most watchfull attention the opperation of remedial exhibitions in the system of the patient, And thus this formidable derangement, of a most important organ of life and health. — thus inflamation of the mucous membrane of the Bronchia — its pathology understood, may be removed, may yeild to the powers of physiological administration, in connection and direction of judicious Practice